

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1127	UC096	Glenn Massarano	Version 3.0 - Volume 2		Version 3.0 - Volume 2	Sections 3.1.6.5 / 3.1.6.6

Comment: The operation name and the input/output names for in section 3.1.6.5 and 3.1.6.6 appear switched.

section 3.1.6.5.3 has:

```
REFERENCED-MESSAGES {
  { tmddMessages 29 }, -- Input ***** problem
  { tmddMessages 28 }, -- Output ***** problem
  { tmddMessages 10 } -- Fault
}
```

section 3.1.6.5.4 has

```
<operation xmlns="http://schemas.xmlsoap.org/wsdl/"
name="DIDMSMessageAppearanceRequest">
  <input message="tns:MSG_DMSMessageInventoryRequest"/> ***** problem
  <output message="tns:MSG_DMSMessageInventory"/> ***** problem
  <fault name="errorReport" message="tns:MSG_ErrorReport"/>
</operation>
```

section 3.1.6.6.3 has:

```
REFERENCED-MESSAGES {
  { tmddMessages 27 }, -- Input ***** problem
  { tmddMessages 26 }, -- Output ***** problem
  { tmddMessages 10 } -- Fault
}
```

section 3.1.6.6.4 has

```
<operation xmlns="http://schemas.xmlsoap.org/wsdl/"
name="DIDMSMessageInventoryRequest">
  <input message="tns:MSG_DMSMessageAppearanceRequest"/> ***** problem
  <output message="tns:MSG_DMSMessageAppearance"/> ***** problem
  <fault name="errorReport" message="tns:MSG_ErrorReport"/>
</operation>
```

for reference, tmdd messages 26, 27, 28, and 29 are:

from 3.2.6.5, tmdd message 26: dMSMessageAppearanceMsg
from 3.2.6.6, tmdd message 27: dMSMessageAppearanceRequestMsg
from 3.2.6.7, tmdd message 28: dMSMessageInventoryMsg
from 3.2.6.8, tmdd message 29: dMSMessageInventoryRequestMsg

suggested solution: (changes are marked with a "***** change" towards the end of the line.

section 3.1.6.5.3:

```
REFERENCED-MESSAGES {
  { tmddMessages 27 }, -- Input ***** change
  { tmddMessages 26 }, -- Output ***** change
  { tmddMessages 10 } -- Fault
}
```

section 3.1.6.5.4

```
<operation xmlns="http://schemas.xmlsoap.org/wsdl/"
name="DIDMSMessageAppearanceRequest">
  <input message="tns:MSG_DMSMessageAppearanceRequest"/> ***** change
  <output message="tns:MSG_DMSMessageAppearance"/> ***** change
  <fault name="errorReport" message="tns:MSG_ErrorReport"/>
</operation>
```

Section 3.1.6.6.3:

```
REFERENCED-MESSAGES {
  { tmddMessages 29 }, -- Input ***** change
  { tmddMessages 28 }, -- Output ***** change
  { tmddMessages 10 } -- Fault
}
```

Comments

section 3.1.6.6.4

```
<operation xmlns="http://schemas.xmlsoap.org/wsdl/"
name="DIDMSMessageInventoryRequest">
  <input message="tns:MSG_DMMessageInventoryRequest"/>      ***** change
  <output message="tns:MSG_DMMessageInventory"/>          ***** change
  <fault name="errorReport" message="tns:MSG_ErrorReport"/>
</operation>
```

corresponding changes to the distributed xml and xml output should be made.

Resolution:

Comment Status: Closed

Disposition: Accepted

The errors are corrected in TMDD v3.01.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1128	UC097	Glenn Massarano	Version 3.0 - Volume 2		Version 3.0 - Volume 2	Volume 2

Comment: problem:

tmdd specifies use of the doc/literal form of the wsdl. it also specifies messages with multiple parts. in the xml, those messages include every case of:

- MSG_XxxxInventoryUpdate
- MSG_XxxxStatusUpdate
- MSG_XxxxScheduleUpdate
- MSG_XxxxDataUpdate
- MSG_XxxxSubscription

in addition to

- MSG_CenterActiveVerificationSubscription
- MSG_CenterActiveVerificationUpdate
- MSG_FullEventUpdateUpdate
- MSG_EventIndexUpdate
- MSG_ActionLogUpdate

ws-i appears to not allow this. a reference to this can be seen here: http://www.ws-i.org/Profiles/BasicProfile-1.1.html#Bindings_and_Parts <http://www.ws-i.org/Profiles/BasicProfile-1.1.html#Bindings_and_Parts>

a suggested resolution is to change the messages to each of the message to single parts and define new messages types in the tmdd.xsd. for example:

```
<message name="MSG_CCTVInventoryUpdate">
  <part name="c2cMsgAdmin" element="c2c:c2cMessagePublication"/>
  <part name="message" element="tmdd:cCTVInventoryMsg"/>
</message>
```

could be changed to

```
<message name="MSG_CCTVInventoryUpdate">
  <part name="message" element="tmdd:cCTVInventoryMsgResponse"/>
</message>
```

and the following type could be defined in tmdd.xsd

```
<xs:element name="cCTVInventoryMsgResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="c2cMsgAdmin" type="c2cMessagePublication"/>
      <xs:element name="cctvInventoryMsg" type="cCTVInventoryMsg"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

Resolution: Comment Status: Open Disposition: Rejected

The format of the TMDD dialogs and message parts is consistent with the current version of NTCIP 2306, which is a normative reference. Web Services Interoperability Organization (WS-I) is NOT a normative reference for either TMDD v3.0 or NTCIP 2306. Thus, message with multiple parts as shown in Volume II is allowable for conformance to TMDD v3.0.

If consistency with WS-I is a requirement or an issue, then the TMDD Steering Committee may need to address the WS-I versus NTCIP 2306 issue.

However, what is in TMDD v3.0 is what is specified in NTCIP 2306.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1129	UC098	John Boguslawski	TMDD.xsd / TMDD.wsdl		Version 3.0	TMDD.xsd, TMDD.wsdl

Comment: I am viewing the TMDD.xsd and TMDD.wsdl using xml spy. I have a questions regarding the requirements tag <requirements>, they seem to point to requirement numbers that i cannot seem to correlate to any other document, REQ1156 for example. Could you point me in the right direction please.

Resolution: Comment Status: Closed Disposition: Informative

This is not an error. The requirement identifier referred to in the e-mail below is found in the "source" electronic files - XML Schema, WSDL, and Requisite Pro database.

The e-mails specifically refer to the electronic XML files - XML Schema and WSDL.

The requirement id in the XML Schema is used to verify that the XML Schema and Requisite Pro database are in sync. The requirement tag helps identify any inconsistencies (e.g., missing XML elements with no requirement, or requirements with no design) between the XML Schema (and WSDL) and the Requisite Pro database.

The published TMDD documents trace between clauses (paragraph numbers) in Volume 1 and Volume 2, and therefore the requirement id is not needed to navigate the published standard.

The XML Schema fragments in TMDD Volume 2 do not show any requirements tags. Nor does the requirement id show up in the traceability matrices.

So, the answer is that the requirements tag in the XML Schema and WSDL points to one or more records in the Requisite Pro database, which can be viewed using Microsoft Access or other software that can read the MS Access .mdb file format. The Requisite Pro database is available on the TMDD web site, www.ite.org/standards/tmdd.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1130	UC099	Steve Brown	Version 3.0 - Volume 2		Version 3.0 - Volume 2	

Comment: We are trying to define a web service method that returns the sectionControlScheduleMsg. We have been unable to find any of the standard messages that return this element. We have investigated using the IntersectionSignalTimingPatternInventoryRequestMsg and returning the intersectionSignalTimingPatternInventoryMsg, however, our scheduler is section based and not intersection based. Secondly, the intersectionSignalTimingPatternInventoryMsg does not really appear to be scheduler oriented because there is not start time defined. I know we could create a custom message, but we would prefer not to do that.

Resolution: Comment Status: Closed Disposition: Accepted

there is an error in the TMDD.wsdl.

The dialog, dlSectionControlScheduleRequest should have as an input message MSG_DeviceInformationRequest and as the output message MSG_SectionControlScheduleResponse.

These errors have been corrected in TMDD v3.01.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1131	UC096	Glenn Massarano	Version 3.0 - Volume 2		Version 3.0 - Volume 2	

Comment: it looks like some messages got switched around. In the wsdl, we found:

```
<operation name="DIDMSMessageInventoryRequest">
  <documentation><objectClass>DMS</objectClass><msgPattern>R-
R</msgPattern><requirement>REQ1160</requirement></documentation>

  <input message="tns:MSG_DMSMessageAppearanceRequest"/>
  <output message="tns:MSG_DMSMessageAppearance"/>
  <fault name="errorReport" message="tns:MSG_ErrorReport"/>
</operation>
```

and, further down,

```
<operation name="DIDMSMessageAppearanceRequest">
  <documentation><objectClass>DMS</objectClass><msgPattern>R-
R</msgPattern><requirement>REQ59</requirement></documentation>

  <input message="tns:MSG_DMSMessageInventoryRequest"/>
  <output message="tns:MSG_DMSMessageInventory"/>
  <fault name="errorReport" message="tns:MSG_ErrorReport"/>
</operation>
```

Resolution:	Comment Status: Closed	Disposition: Accepted
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The errors have been corrected in TMDD v3.01.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1132	UC096	Glenn Massarano	Version 3.0 - Volume 2		Version 3.0 - Volume 2	

Comment: The type here is byte and really should be string. (it is in v2.1 ... 1..256 characters.

```
<xs:simpleType name="DmsMessageMultiString">
  <xs:restriction base="xs:byte"/>
</xs:simpleType>
```

Resolution:	Comment Status: Closed	Disposition: Accepted
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The error has been corrected in TMDD v3.01.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1133	UC100	D.T. Pham	TMDD.xsd / TMDD.wsdl		Version 3.0	

Comment: I would like to let you know that the original TMDD.wsdl file from the TMDD 3 standard has caused two problems that I encountered:

- 1) The two part message especially in Subscription and Publication messages are not WS-I compliance. WS-I forbids the use of more than one part per message in a *document literal* style service.
- 2) The custom soap fault in the operation binding causes some errors when compiling.

Since I only need part of the TMDD.wsdl, I have created two wsdl files of my own (included in the attached zip file, IAI_TMDD3_Congestion.wsdl and IAI_TMDD3_Signal.wsdl). However, I have to wrapped the two part message to one message (in the end of TMDD.xsd file) and make a little change in custom soap fault in order to make it works.

Resolution: Comment Status: Open Disposition: Rejected
The format of the TMDD dialogs and message parts is consistent with the current version of NTCIP 2306, which is a normative reference. Web Services Interoperability Organization (WS-I) is NOT a normative reference for either TMDD v3.0 or NTCIP 2306. Thus, message with multiple parts as shown in Volume II is allowable for conformance to TMDD v3.0.

If consistency with WS-I is a requirement or an issue, then the TMDD Steering Committee may need to address the WS-I versus NTCIP 2306 issue.

However, what is in TMDD v3.0 is what is specified in NTCIP 2306.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1134	UC101	Brian Wagner	TMDD.xsd / TMDD.wsdl / TMDD/xml		Version 3.0	

Comment: Using the .NET Framework

Wsdl.exe - ASPX – You can create a client/server stub.

SvcUtil.exe for WCF applications does not create a stub from TMDD WSDL.

Windows Communications Foundation

Unions are ignored

Enumerations

Max values for +10,000 is not permitted line 1623 of Irms local.

SOAP 1.1 – Throws an error.

SOAP 1.2 – Goes further.

Resolution: Comment Status: Closed Disposition: Future
These are implementation specific problems that may need to be researched and tested, as determined by the TMDD Steering Committee.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1135	UC102	Walter Crear	Version 3.0 - Volume 2		Version 3.0	Vol-2 Sections 3.3.6.6.2 and 3.3.6.6.3 TMDD.xsd lines 4201-4207

Comment: The TMDD.xsd definition of the DMSInventory Data Frame includes 1 element (link-direction) that is not included in the Vol 2 definition for that Data Frame.

Resolution: Comment Status: Closed Disposition: No Longer Applica

The wrong version of the .xsd file was posted on the TMDD website at one point. The correct version was checked to verify that the discrepancy does not still exist and has been posted on the TMDD website.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1136	UC102	Walter Crear	Version 3.0 - Volume 2		Version 3.0	TMDD.xsd

Comment: TMDD.xsd lines 1346 - 153, 1921-2000, 2084-2169, 3977-4029, 8624-8640, 8644-8667, 8806-8831, 8835-8867, 9043-9066, 9494-9517, 9521-9550, 9554-9612, 10010-10021, 10025-10036, 11549-11585, 12400-12418, 12422-12440;

Orphan Design Elements:
rampMeterPlanInventoryRequestMsg,
TrafficMonitoringInventoryDetails,
CCTVDeviceStatus,
DMSDeviceStatus,
IntersectionActiveTurningMovements,
IntersectionCoordinatedPhases,
IntersectionSignalInterval,
IntersectionSignalIntervalDuration,
IntersectionSignalPhase,
IntersectionSpecialFunctions,
IntersectionSplitInformation,
IntersectionTurningMovement,
LinkLanesList,
LinkLaneTurnTypeList,
RampMeterPlanInventoryRequest,
SectionLinkList,
SectionNodeList

There are a number of data concepts that are included in the TMDD schema that are not included in the Volume II design detail. As a result it is unclear which of these items are actually part of the standard, and which are not. The items are

rampMeterPlanInventoryRequestMsg,
TrafficMonitoringInventoryDetails,
CCTVDeviceStatus,
DMSDeviceStatus,
IntersectionActiveTurningMovements,
IntersectionCoordinatedPhases,
IntersectionSignalInterval,
IntersectionSignalIntervalDuration,
IntersectionSignalPhase,
IntersectionSpecialFunctions,
IntersectionSplitInformation,
IntersectionTurningMovement,
LinkLanesList,
LinkLaneTurnTypeList,
RampMeterPlanInventoryRequest,
SectionLinkList,
SectionNodeList

Resolution: Comment Status: Closed Disposition: No Longer Applica

The wrong version of the .xsd file was posted on the TMDD website at one point. The correct version was checked to verify that the discrepancy does not still exist and has been posted on the TMDD website.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1137	UC103	Walter Crear	TMDD.wsdl		Version 3.0	

Comment: Some of the Publication Dialogs defined in the TMDD.WSDL file you sent me don't include the "c2cMessagePublication" message as a part of the dialog input message definition. This appears to be in conflict with NTCIP 2306 v1.69 Section 4.2.2.2 SOAP Publication Message, Normative requirement c.

4.2.2.2 SOAP Publication Message

The following represents a correct form of a SOAP publication messages.

```
<?xml version="1.0" encoding="UTF-8"?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/" >
<soap:Header>
</soap:Header>
<soap:Body>
<!-- C2C Publication Information -->
<c2cMessagePublication>
<!-- C2C Publication Message Header Content -->
</c2cMessagePublication>
<!--XML message set standard message content, e.g. MS/ETMCC -->
<dMSDeviceStatus>
<!-- XML Message Content -->
</dMSDeviceStatus>
</soap:Body>
</soap:Envelope>
```

Normative

- The SOAP message shall consist of a <soap:Envelope> tag with two internal tags: a <soap:Header> tag followed by a <soap:Body> tag.
- The <soap:Header> tag is provided to ensure that C2C communications software is able to handle a <soap:Header>, even if no header is provided.
- The <soap:Body> shall contain two child tags: <c2cMessagePublication>, and one containing the message set standard XML, for example, a TMDD DMS Status Device response message. Use the <IMWrapper> tag to encapsulate IEEE 1512 messages, and <atisMessage> tag for SAE-J2354 messages. XML Messages shall be capable of being validated using the XML Schema(s) referenced in the WSDL.

From a WSDL point of view, this requirement seems to be repeated in Section 6.4.3 Publication Message.

The Publication Dialogs that have this condition are:

***** Dialogs *****

Dialog DICCTVInventoryUpdate with pattern Pub
Input C2C: Message: cCTVInventoryMsg
Output Message: c2cMessageReceipt

Dialog DICCTVStatusUpdate with pattern Pub
Input C2C: Message: cCTVStatusMsg
Output Message: c2cMessageReceipt

Dialog DIDetectorInventoryUpdate with pattern Pub
Input C2C: Message: detectorInventoryMsg
Output Message: c2cMessageReceipt

Dialog DIDetectorStatusUpdate with pattern Pub
Input C2C: Message: detectorStatusMsg
Output Message: c2cMessageReceipt

Dialog DIDetectorDataUpdate with pattern Pub
Input C2C: Message: detectorDataMsg
Output Message: c2cMessageReceipt

Dialog DIDMSInventoryUpdate with pattern Pub
Input C2C: Message: dMSInventoryMsg

Comments

Output Message: c2cMessageReceipt

Dialog DIDMSMessageInventoryUpdate with pattern Pub
Input C2C: Message: dMSMessageInventoryMsg
Output Message: c2cMessageReceipt

Dialog DIDMSStatusUpdate with pattern Pub
Input C2C: Message: dMSStatusMsg
Output Message: c2cMessageReceipt

Dialog DIESSInventoryUpdate with pattern Pub
Input C2C: Message: eSSInventoryMsg
Output Message: c2cMessageReceipt

Dialog DIESSStatusUpdate with pattern Pub
Input C2C: Message: eSSStatusMsg
Output Message: c2cMessageReceipt

Dialog DIESSObservationReportUpdate with pattern Pub
Input C2C: Message: eSSObservationReportMsg
Output Message: c2cMessageReceipt

Dialog DIFullEventUpdateUpdate with pattern Pub
Input C2C: Message: fEUMsg
Output Message: c2cMessageReceipt

Dialog DIGateInventoryUpdate with pattern Pub
Input C2C: Message: gateInventoryMsg
Output Message: c2cMessageReceipt

Dialog DIGateStatusUpdate with pattern Pub
Input C2C: Message: gateStatusMsg
Output Message: c2cMessageReceipt

Dialog DIGateControlScheduleUpdate with pattern Pub
Input C2C: Message: gateControlScheduleMsg
Output Message: c2cMessageReceipt

Dialog DIHARInventoryUpdate with pattern Pub
Input C2C: Message: gateInventoryMsg
Output Message: c2cMessageReceipt

Dialog DIHARMessageInventoryUpdate with pattern Pub
Input C2C: Message: gateInventoryMsg
Output Message: c2cMessageReceipt

Dialog DIHARStatusUpdate with pattern Pub
Input C2C: Message: hARStatusMsg
Output Message: c2cMessageReceipt

Dialog DIHARControlScheduleUpdate with pattern Pub
Input C2C: Message: hARControlScheduleMsg
Output Message: c2cMessageReceipt

Dialog DIIntersectionSignalInventoryUpdate with pattern Pub
Input C2C: Message: intersectionSignalInventoryMsg
Output Message: c2cMessageReceipt

Dialog DIIntersectionSignalStatusUpdate with pattern Pub
Input C2C: Message: intersectionSignalStatusMsg
Output Message: c2cMessageReceipt

Dialog DIIntersectionSignalControlScheduleUpdate with pattern Pub
Input C2C: Message: intersectionSignalControlScheduleMsg
Output Message: c2cMessageReceipt

Comments

Dialog DILCSInventoryUpdate with pattern Pub
Input C2C: Message: ICSInventoryMsg
Output Message: c2cMessageReceipt

Dialog DILCSStatusUpdate with pattern Pub
Input C2C: Message: ICSStatusMsg
Output Message: c2cMessageReceipt

Dialog DILCSControlScheduleUpdate with pattern Pub
Input C2C: Message: ICSControlScheduleMsg
Output Message: c2cMessageReceipt

Dialog DIRampMeterInventoryUpdate with pattern Pub
Input C2C: Message: rampMeterInventoryMsg
Output Message: c2cMessageReceipt

Dialog DIRampMeterStatusUpdate with pattern Pub
Input C2C: Message: rampMeterStatusMsg
Output Message: c2cMessageReceipt

Dialog DIRampMeterControlScheduleUpdate with pattern Pub
Input C2C: Message: rampMeterControlScheduleMsg
Output Message: c2cMessageReceipt

Dialog DISectionStatusUpdate with pattern Pub
Input C2C: Message: sectionStatusMsg
Output Message: c2cMessageReceipt

Dialog DISectionControlScheduleUpdate with pattern Pub
Input C2C: Message: sectionControlScheduleMsg
Output Message: c2cMessageReceipt

Dialog DISectionTimingPatternUpdate with pattern Pub
Input C2C: Message: sectionControlResponseMsg
Output Message: c2cMessageReceipt

Dialog DIVideoSwitchInventoryUpdate with pattern Pub
Input C2C: Message: videoSwitchInventoryMsg
Output Message: c2cMessageReceipt

Dialog DIVideoSwitchStatusUpdate with pattern Pub
Input C2C: Message: videoSwitchStatusMsg
Output Message: c2cMessageReceipt

Resolution: Comment Status: Closed Disposition: Accepted

Two messages are defined. The bottom one is for Publication/Updates.

```
<message name="MSG_CCTVInventory">
  <!-- CCTV - Closed Circuit Television Camera Messages -->
  <part name="message" element="tmdd:cCCTVInventoryMsg"/>
</message>
<message name="MSG_CCTVInventoryUpdate">
  <part name="c2cMsgAdmin" element="c2c:c2cMessagePublication"/>
  <part name="message" element="tmdd:cCCTVInventoryMsg"/>
</message>
```

An ExternalCenter should set up a "receiver" which SHOULD be modeled in the WSDL as:

```
<operation name="DICCTVInventoryUpdate">
```

```
<documentation><objectClass>CCTV</objectClass><msgPattern>Pub</msgPattern><requirement>REQ550</requirement></do
cumentation>
```

```
<input message="tns:MSG_CCTVInventoryUpdate"/>
<output message="tns:MSG_ConfirmationReceipt"/>
```

Comments

```
<fault name="errorReport" message="tns:MSG_ErrorReport"/>
</operation>
```

The TMDD shows this INCORRECTLY as:

```
<operation name="DICCTVInventoryUpdate">
```

```
<documentation><objectClass>CCTV</objectClass><msgPattern>Pub</msgPattern><requirement>REQ550</requirement></do
cumentation>
  <input message="tns:MSG_CCTVInventory"/>
  <output message="tns:MSG_ConfirmationReceipt"/>
  <fault name="errorReport" message="tns:MSG_ErrorReport"/>
</operation>
```

Unfortunately, it seems that this is the case for all the publication-update dialogs, though I haven't checked every single one.

This has been corrected for TMDD v3.01.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1138	UC104	Walter Crear	Version 3.0 - Volume 1		Version 3.0	Volume 1, Section 5.4.2

Comment: From reviewing the use of predicates in the NRTM, it appears that in most cases the requirement associated with the predicate is included in the list of requirements which together satisfy a need. The Subscription predicate appears to be the exception, since it maps to a TMDD Need. It would be better to trace all predicates to a Requirement Section.

Resolution: Comment Status: Closed Disposition: Accepted

Updated the predicate for Subscriptions to be Section 3.3.1.3.1 and/or 3.3.1.3.2.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1139	UC104	Walter Crear	Version 3.0 - Volume 1		Version 3.0	

Comment: As the TMDD NRTM is currently constructed, a single option group can be referenced under multiple selectable user needs. For example option group "O.3" is referenced for User Needs 2.3.4.6 (Need for Current Event Information), 2.3.4.7 (Need for Planned Event Information), 2.3.4.8 (Need for Forecast Event Information) and 2.3.7.1.7 (Need for Event Data). The appropriate approach for confirming that the defined conformance status rules are being followed, is to check that a conformance group requirement is met by the requirements traced to the particular need. In this context an optional requirement could be selected (and made mandatory) as it relates to one need, but continue to be non-selected (optional) as part of a separate need.

The requirements associated with the needs identified above are all satisfied through the Full Event Update Request Dialog. This setup would allow for 4 different (and potentially contrary) sets of project requirements to be specified for the same Dialog.

It would probably be better to have option groups be unique between needs, but that change wouldn't resolve the issue mentioned above.

Resolution: Comment Status: Closed Disposition: Informative

I wouldn't quite characterize the last sentence that way. If a requirement is selected, no matter which user need it satisfies, the requirement must be fulfilled by the project.

So, for example, UN1 may point to Req 1, and UN2 may point to Req 1. If I select UN1, but not UN2, it doesn't mean I don't have to fulfill Req1 - I have to because I selected UN1.

So, for TMDD Events - if I select the UN for Planned Events, for example, yes, I "inadvertantly" satisfy most (but not all) the requirements for Forecast Events also.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
	1140UC105	Steve Brown			Version 3.0	

Comment: An excerpt from the NTCIP-References.xsd below:

```
<!-- *****-->
<!-- NTCIP 1201 -->
<xs:simpleType name="TimeBaseScheduleNumber">
<xs:restriction base="xs:byte"/>
</xs:simpleType>
<xs:simpleType name="TimeBaseScheduleMonth"> 'Based on NTCIP
definition, how will the data be returned in a signed byte?
<xs:restriction base="xs:byte"/>
</xs:simpleType>

<xs:simpleType name="TimeBaseScheduleDay">
<xs:restriction base="xs:byte"/>
</xs:simpleType>
<xs:simpleType name="TimeBaseScheduleDate"> 'Based on NTCIP
definition, how will the data be returned in a signed byte?
<xs:restriction base="xs:byte"/>
</xs:simpleType>
```

Resolution:	Comment Status: Closed	Disposition: Accepted
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Unfortunately, the NTCIP references are just that - references. Since the NTCIP objects are in ASN.1 and not XML, and the TMDD is essentially in XML format, it was not in the project budget to formally translate NTCIP objects from ASN.1 to XML Schema.

Update: The NTCIP-References.xsd was updated with the correct data types, ranges, enumerations, and with the version of the NTCIP standard it references.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1142	UC106	Thomas Jacobs			Version 3.0	

Comment: We are looking for the specific schema elements in the TMDD related to:

1. Travel Lanes Cleared – the time stamp in the TMC database indicating when all travel lanes are open to traffic (note: this time stamp is specific to travel lanes so a shoulder or shoulders may still be closed due to incident activity)
2. Incident Cleared – the time stamp in the TMC database indicating when the last responder has left the scene and the scene is cleared of all incident activity

We'd also be interested in the specific schema element(s) related to incident start time. The Traffic Incident PM defines start time as the "first recordable awareness by a responsible agency" so it tries to account for the fact that the start time stamp might exist in a CAD or other external system. Of course, the majority of TMC's enter the start time via an operator entry so I'm curious what the TMDD schema element is for start time. We are aware that elements exist for start-time and expected-start-time though they are both optional.

We also understand that you can add whatever you want to a schema or that you can infer/derive data by auditing an entire message trail.

If we can clearly point out these TIM PM related schema or how they can be derived, it would be one way of helping agencies collect this data in a much more standardized way.

Resolution:	Comment Status:	Disposition:
	Closed	Informative

First, let me point to you where in the TMDD v3 schema you can find the information you're looking for, then I'll explain how it is supposed to work, and why it works this way.

For all events, the MessageHeader data frame is required. One of the required data elements is the message-time-stamp.

The remaining TMDD v3 schema elements you are interested in are in the EventElementDetail data frame.

Within the EventElementDetail data frame is an EventTimes data frame, which includes the following data elements:

- start-time = start time of a current event
- alternate-end-time = expected end time of a current event

Also within the EventElementDetail data frame is an EventLanes data frame, which includes the following data elements:

- lanes-total-affected = total number of lanes affected by the event
- event-lanes-affected = the lane number of each lane affected.

This is how we expect to happen using TMDD during the course of an incident.

Once an operator learns of an incident, they start a new event, resulting in a new message-number. The message-time-stamp will likely be the "first recordable awareness by a responsible agency" time.

As time progresses, an operator will probably enter a start-time and an alternate-end-time. As you noted, these fields are considered optional by TMDD v3, but there is no reason why an implementation cannot make either element MANDATORY for that implementation. TMDD v3 makes these elements optional because sometimes, when a message is first entered into the system, an operator may not know the full details of the incident (e.g., exact location) to enter into the system - so rather than force the operator to enter an erroneous value, TMDD v3 makes most elements optional. However, it is expected that the time and location information will be entered into the system as the incident is confirmed and details are entered into the system. This includes the lanes-total-affected and event-lanes-affected.

The incident is considered cleared at the time of the timestamp of the last event update message for this event.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1143	UC107	Thomas Jacobs			Version 3.0	

Comment: 1. The National TIM Performance measure "Roadway Clearance Time" requires a time stamp when all travel lanes are cleared. I see that there are lane specific data elements (lanes-total-affected and event-lanes-affected). Is the assumption that these data elements will be updated through the course of the incident such that when, for example, lanes-total-affected = 0, the roadway is considered cleared?

2. You indicated that the incident is considered cleared at the time of the timestamp of the last event update message. So while there is an alternate-end-time (expected end time of event) that can be input at the start of the incident, there is no specific data element for "end-time", "event-end-time", or "incident-closed-time" (this is the time, when according to the TIM definition, the scene is entirely cleared). Part of the problem with relying on the timestamp of the last event update is that some agencies record a "return-to-normal-time" which is when, in their estimation, traffic conditions have return to prevent or normal conditions. This time stamp would not be an accurate capture of when the incident scene is entirely cleared.

I'd like to suggest, in order to help these agencies get the time stamps required to derive the Nationally adopted TIM PMs, that the TMDD be very clear in terms of data elements with respect to (1) all travel lanes cleared time, and (2) event end time.

Resolution:	Comment Status:Open	Disposition: Accepted
-------------	---------------------	-----------------------

Added a new EventTimesExt data frame with a new roadway-clear-time data element to support a new optional requirement to define the time an unplanned event ended as part of the event time information.

Version Comment Addressed: TMDD v3.1

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1144	UC108	Blake Christie		243	Version 3.0	Volume 2

Comment: Schema and Vol II Design content mismatch.

The TMDD.xsd definition of the DMSInventory Data Frame includes 1 element (link-direction) that is not included in the Vol 2 definition for that Data Frame.

Suggested resolution: Update the Schema on the Web Site to the correct version.

Resolution:	Comment Status:Closed	Disposition: Accepted
-------------	-----------------------	-----------------------

This comment was originally received early 2010. The wrong version of the standard as on the website. Need to confirm the error no longer exist.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
	1146	UC108	Blake Christie		Version 3.0	

Comment: Incorrect Input Message references on Publication dialog operations.

An ExternalCenter should set up a "receiver" which SHOULD be modeled in the WSDL as:

```
<operation name="DICCTVInventoryUpdate">
<documentation><objectClass>CCTV</objectClass><msgPattern>Pub</msgPattern><requirement>REQ550</requirement></documentation>
  <input message="tns:MSG_CCTVInventoryUpdate"/>
  <output message="tns:MSG_ConfirmationReceipt"/>
  <fault name="errorReport" message="tns:MSG_ErrorReport"/>
</operation>
```

The TMDD shows this INCORRECTLY as:

```
<operation name="DICCTVInventoryUpdate">
<documentation><objectClass>CCTV</objectClass><msgPattern>Pub</msgPattern><requirement>REQ550</requirement></documentation>
  <input message="tns:MSG_CCTVInventory"/>
  <output message="tns:MSG_ConfirmationReceipt"/>
  <fault name="errorReport" message="tns:MSG_ErrorReport"/>
</operation>
```

Unfortunately, it seems that this is the case for all the publication-update dialogs.

Proposed resolution: Replace the erroneous message references.

Resolution:	Comment Status: Closed	Disposition: Accepted
See the resolution for Comment #1137 (repeated here).		

Two messages are defined. The bottom one is for Publication/Updates.

```
<message name="MSG_CCTVInventory">
  <!-- CCTV - Closed Circuit Television Camera Messages -->
  <part name="message" element="tmd:cCCTVInventoryMsg"/>
</message>
<message name="MSG_CCTVInventoryUpdate">
  <part name="c2cMsgAdmin" element="c2c:c2cMessagePublication"/>
  <part name="message" element="tmd:cCCTVInventoryMsg"/>
</message>
```

An ExternalCenter should set up a "receiver" which SHOULD be modeled in the WSDL as:

```
<operation name="DICCTVInventoryUpdate">
<documentation><objectClass>CCTV</objectClass><msgPattern>Pub</msgPattern><requirement>REQ550</requirement></documentation>
  <input message="tns:MSG_CCTVInventoryUpdate"/>
  <output message="tns:MSG_ConfirmationReceipt"/>
  <fault name="errorReport" message="tns:MSG_ErrorReport"/>
</operation>
```

The TMDD shows this INCORRECTLY as:

```
<operation name="DICCTVInventoryUpdate">
<documentation><objectClass>CCTV</objectClass><msgPattern>Pub</msgPattern><requirement>REQ550</requirement></documentation>
  <input message="tns:MSG_CCTVInventory"/>
  <output message="tns:MSG_ConfirmationReceipt"/>
  <fault name="errorReport" message="tns:MSG_ErrorReport"/>
</operation>
```

Comments

</operation>

Unfortunately, it seems that this is the case for most publication-update dialogs.

This has been corrected for TMDD v3.01.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1147	UC108	Blake Christie			Version 3.0	NRTM

Comment: There are instances within the Matrix where a single requirement has multiple status notations within the conformance column.

- 3.3.6.6.4.3.3 Collector Configuration Information (O and Collector Config:M)
- 3.3.6.2.3.3 Subscribe to Detector Data Information (O and Subscription:O)
- 3.3.6.2.1.5.2.2 Lane Number (M and O)
- 3.3.6.11.1.5.2.23 Time Reference (M and O)
- 3.3.4.6.3.8.1.1 Lane Type (Event Lane:O and O)
- 3.3.4.6.3.7 Event Name (M and O)
- 3.3.4.6.3.6 Event Description (M and O)
- 3.3.4.6.3.5.1.2 Name of Area (AreaLocation:O and O.3(1..*))
- 3.3.4.6.3.5.1.1 Area Identifier (AreaLocation:O and O.3(1..*))
- 3.3.4.4.3.10 Request Start Time Filter (M and O)
- 3.3.4.4.3.1 Event Unique Identifier Filter (M and O)

Proposed resolution: Based on the understanding that the selection of the requirement as part of any one need, makes it selected for any other needs where it appears the recommendation is to select on or the other.

Resolution: Comment Status: Closed Disposition: Accepted
Agreed.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1148	UC108	Blake Christie			Version 3.0	Vol-1 Section 5.4.2 and Table 4

Comment: The predicate "WYSIWYG for Matrix Signs" associated with certain requirements does not match any predicate defined in Section 5.4.2.

Section 5.4.2 defines a predicate called "WYSIWYG" and a predicate called "Matrix Signs". It does not contain a predicate which combines the two, and it is unclear how this joint predicate is to be interpreted from the available standard information.

Resolution: Comment Status: Closed Disposition: Accepted
Changed the predicate to be, "WYSIWYG AND Matrix Signs"

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1149	UC108	Blake Christie			Version 3.0	Table 4

Comment: 3.3.6.6.3.3 Subscribe to ESS Observation Data (also referenced as Subscribe to ESS Observation Data Information)

Proposed resolution: Use Subscribe to ESS Observation Data Information throughout.

Resolution: Comment Status: Closed Disposition: Accepted
Changed to Subscribe ESS Observation Data Information.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1150	UC108	Blake Christie		253	Version 3.0	

Comment: Requirement 3.3.6.1.4.2.1 is Mandatory, but the support column shows Yes/No.

The requirement "3.3.6.1.4.2.1 Required Device Control Response Content" is mandatory but the Support Column shows yes/no for need 2.3.6.8.4.

Proposed resolution: Change support column to Yes.

Resolution:	Comment Status: Closed	Disposition: Accepted
Will be corrected in TMDD v3.01.		
Version Comment Addressed:		

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1151	UC108	Blake Christie		190	Version 3.0	

Comment: The Other Requirements field related to requirement 3.3.4.6.3.5.5.7 is set to x.

3.3.4.6.3.5.5.7 Point Location Rank (Other Requirments X)

Clear the other requirement cell related to this requirement.

Resolution:	Comment Status: Closed	Disposition: Accepted
Will be corrected in TMDD v3.01.		
Version Comment Addressed:		

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1152	UC108	Blake Christie		291	Version 3.0	

Comment: The support for requirement 3.3.4.6.3.4.2.10.1 is defined as Yes/No.

The support for requirement 3.3.4.6.3.4.2.10.1 is defined as Yes/No. All other instances have support defined as Yes/NA.

Define the suppot for this instance as Yes/NA.

Resolution:	Comment Status: Closed	Disposition: Accepted
Will be corrected in TMDD v3.01.		
Version Comment Addressed:		

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1153	UC109	Robert Rausch		28	Version 3.0	Section 2.1; Volume II

Comment: Volume II Section 2.1.1 states that the TMDD.xsd electronic file is normative to the standard and hence its reference to NTCIP-References.xsd is normative.

Does this make the NTCIP-References.xsd also normative to the standard? What is the TMDD working group's intent for the "NTCIP References.xsd" file that supports the TMDD?

The handling of external references changed between the latest versions of the TMDD. In TMDD V02.01 the TMDD schema references NTCIP.xsd that contains the description for DmsMessageMultiString as a variable length octet string (for transmitting the message displayed by a DMS). In TMDD V03.00 the external reference is to NTCIP-References.xsd and this file contains a description for DmsMessageMultiString as a single byte. Note that this situation was referenced by the comments of Jason Ellison as Comment ID 1036 of the 080428Comments.xls file and noted as a significant source of confusion. The working group rejected and closed the comment (see the details below).

Possible intents for NTCIP-References.xsd could be:

- A) For each implementer to provide its own version the file to bridge the gap between the TMDD and the external devices referenced.
- B) For the TMDD working group to develop a standard reference to bridge from the file to individual device schemas.
- C) To be determined.

TransCore has treated the external references as normative in both versions. This requires a work-around extension to allow continued communications of DMS message content. Is this the intended implementation?

Resolution:	Comment Status: Closed	Disposition: Accepted
-------------	------------------------	-----------------------

The intent is b.

Updated the NTCIP-References.xsd with the correct ranges and types. Also added enumeration values and units, as appropriate.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1154	UC110	Patrick Powell		TOC	Version 3.0	Volume 1, TOC

Comment: There is no section 2.3.6.1 in the Table of Contents. Should be Need to Share Traffic Detector Data.

Resolution:	Comment Status: Closed	Disposition: Accepted
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This will be corrected in TMDD Version 3.01.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1155	UC110	Patrick Powell			Version 3.0	Volume 2, Section 3.3.5.8

Comment: In TMDD V3, Vol 2, Section 3.3.5.8 Device Inventory Header an XML data type definition is given.

However, in the TMDD.xsd file something slightly different is given:

The following entries are present in the TMDD document but missing from the WSDL file:

- controller-description
- node-id
- node-name
- link-name
- link-direction

Resolution: Comment Status: Closed Disposition: No Longer Applica

The user may be using an older version of the tmdd.xsd and tmdd.wsdl file. There was a point (over several months) where a draft version of the XML schema files was on the ITE website. Checked the current version of the XML schema files against volume 2, and the entries are consistent.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1156	UC110	Patrick Powell			Version 3.0	Volume 2, Section 3.3.18.5

Comment: In TMDD V3, Vol 2, Section 3.3.18.5 Ramp Meter Inventory Details, and the following XML data type definition is given:

However, in the TMDD.xsd file we have:

The following entries are present in the TMDD document but missing from the WSDL file.

- Controller-description
- node-id
- node-name
- link-name
- link-direction

Resolution: Comment Status: Closed Disposition: No Longer Applica

The user may be using an older version of the tmdd.xsd and tmdd.wsdl file. There was a point (over several months) where a draft version of the XML schema files was on the ITE website. Checked the current version of the XML schema files against volume 2, and the entries are consistent.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1157	UC110	Patrick Powell			Version 3.0	Volume 2, Section 3.3.18.3

Comment: n TMDD V3, Vol 2, Section 3.3.18.3 Ramp Meter Control Schedule, and the following XML data type definition is given:

However, in the TMDD.xsd file we have:

The following entries are present in the TMDD document but missing from the WSDL file:
meter-lane-identifier
action-number

The following entries are in the WSDL file and the TMDD document (XML) but has a different name (respectively):
meter-action = meter-action-control
meter-plan-id = meter-requested-plan
meter-rate = meter-requested-rate

Resolution: Comment Status: Closed Disposition: No Longer Applica

The user may be using an older version of the tmdd.xsd and tmdd.wsdl file. There was a point (over several months) where a draft version of the XML schema files was on the ITE website. Checked the current version of the XML schema files against volume 2, and the entries are consistent.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1158	UC110	Patrick Powell			Version 3.0	Volume 2, Section 3.3.18.8

Comment: n TMDD V3, Vol 2, Section 3.3.18.8 Ramp Meter Plan Inventory, and the following XML data type definition is given:

However, in the TMDD.xsd file we have:

The following entries are present in the TMDD document but missing from the WSDL file:
meter-level

The following entries are in the WSDL file and the TMDD document (XML) but has a different name (respectively):
meter-plan-id = meter-plan

Resolution: Comment Status: Closed Disposition: No Longer Applica

The user may be using an older version of the tmdd.xsd and tmdd.wsdl file. There was a point (over several months) where a draft version of the XML schema files was on the ITE website. Checked the current version of the XML schema files against volume 2, and the entries are consistent.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1159	UC110	Patrick Powell			Version 3.0	SOAP, WSDL

Comment: In Section 4.2 (SOAP Message Encoding) of the NTCIP-2306 the format of the SOAP messages has the format:

```
<?xml version="1.0" encoding="UTF-8"?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/" >
<soap:Header>
</soap:Header>
<soap:Body>
<!-- message content -->
</soap:Body>
</soap:Envelope>
```

Normative

- a) The SOAP message shall consist of a <soap:Envelope> tag with two internal tags: a <soap:Header> tag followed by a <soap:Body> tag.
- b) The <soap:Header> tag is provided to ensure that C2C communications software is able to handle a <soap:Header>, even if no header is provided.

While the empty Header XML information is valid XML 1.1, many XML message toolkits will not generate it in this form, or even at all unless there is a Header entry.

The following modification to the TMDD may be appropriate:

SOAP Messages must conform to the SOAP Encoding as defined in NTCIP 2306 , Section 4, with the following modification.

1. If there are no SOAP Header entries, then the SOAP Header field is not required.
2. The following SOAP message format must be recognized and validated when there are no Header field entries:

```
<?xml version="1.0" encoding="UTF-8"?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/" >
<soap:Header>
</soap:Header>
<soap:Body>
<!-- message content -->
</soap:Body>
</soap:Envelope>
```

Alternative:

```
<?xml version="1.0" encoding="UTF-8"?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/" >
<soap:Header/>
<soap:Body>
<!-- message content -->
</soap:Body>
</soap:Envelope>
```

Alternative:

```
<?xml version="1.0" encoding="UTF-8"?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/" >
<soap:Body>
<!-- message content -->
</soap:Body>
</soap:Envelope>
```

Resolution: Comment Status: Open Disposition: Informative

This is a NTCIP 2306 issue. The discussion was sent to the appropriate NTCIP C2C working group.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1160	UC110	Patrick Powell			Version 3.0	

Comment: In the WSDL for the TMDD message service the soapAction value supplied is a blank string.

```
<binding name="tmddOCSoapHttpServiceBinding" type="tns:tmddOCSoapHttpServicePortType">
  <soap:binding style="document" transport="http://schemas.xmlsoap.org/soap/http"/>
  <operation name="DIArchivedDataProcessingDocumentationMetadataRequest">
    <soap:operation soapAction=" "
      style="document"/>
    <input>
      <soap:body use="literal"/>
    </input>
    <output>
      <soap:body use="literal"/>
    </output>
    <fault name="errorReport">
      <soap:body use="literal"/>
    </fault>
  </operation>
```

When using WSDL 1.1 and SOAP 1.1 this will cause the HTTP Message SOAPAction header to be set as follows:

SOAPAction: " "

It also has the side effect of setting the SOAP message action Header field to a blank string as well:

For RampMeterInventoryRequest:

```
<soap:Envelope>
  <soap:Header>
    <action> </action>
  </soap:Header>
  <soap:Body>
    <n2:deviceInformationRequestMsg xsi:schemaLocation="http://www.ite.org/tmdd TMDD.xsd"
      xmlns:n2="http://www.ite.org/tmdd"
      xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">*M
    <authentication>
```

```
...
  </n2:deviceInformationRequestMsg xsi:schemaLocation="http://www.ite.org/tmdd TMDD.xsd"
</soap:Body>
```

```
<soap:Envelope>
```

For RampMeterStatusRequest:

```
<soap:Envelope>
  <soap:Header>
    <action> </action>
  </soap:Header>
  <soap:Body>
    <n2:deviceInformationRequestMsg xsi:schemaLocation="http://www.ite.org/tmdd TMDD.xsd"
      xmlns:n2="http://www.ite.org/tmdd"
      xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">*M
    <authentication>
```

```
...
  </n2:deviceInformationRequestMsg xsi:schemaLocation="http://www.ite.org/tmdd TMDD.xsd"
</soap:Body>
```

```
<soap:Envelope>
```

When using the document/literal encoding in the WSDL file, this will result a large number of the SOAP Request messages having the same type information for multiple messages. This makes the implementation of a SOAP Server extremely difficult when using off-the-shelf tools. Many of the toolkits expect to find the requested service name in either the HTTP SOAPAction field or in the SOAP action Header field.

By setting the soapAction field in the WSDL to the name of the requested server this will cause a confor ming WSDL to SOAP over HTTP implementation to set the SOAPAction field:

```
<binding name="tmddOCSoapHttpServiceBinding" type="tns:tmddOCSoapHttpServicePortType">
  <soap:binding style="document" transport="http://schemas.xmlsoap.org/soap/http"/>
  <operation name="DIArchivedDataProcessingDocumentationMetadataRequest">
    <soap:operation soapAction="DeviceInformationRequest"
      style="document"/>
```

Comments

```
<input>
<soap:body use="literal"/>
</input>
<output>
<soap:body use="literal"/>
</output>
<fault name="errorReport">
<soap:body use="literal"/>
</fault>
</operation>
```

Resolution:

Comment Status: Closed

Disposition: Accepted

In Section 7.1.2 of NTCIP 2306, clause f in the Normative section, "The soapAction attribute specifies the soapAction which the external center requester must included within an HTTP header. There is no requirement for a soapAction, only that the attribute be present. However, if no soapAction is specified, the soapAction attribute must be written as a double quote followed by two consecutive single quote characters followed by a double quote ("'"). The soapAction shall be a URL that indicates the message handler for the endpoint."

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1161	UC110	Patrick Powell			Version 3.0	

Comment: NTCIP 2306 v01.69, Section 7.2.1 Description of the Subscription-Publication Message Transmission Pattern defines a subscriptionType:

iii. subscriptionType (Mandatory). The subscriptionType may be one of the following:

1) oneTime

2) periodic

3) onChange

The language used indicates that there is a single value for this field and it is mandatory.

However, in the C2C.xsd file this field is defined using:

Descriptive Name: C2CMessageSubscription

```
<xs:element name="c2cMessageSubscription" type="C2cMessageSubscription"/>
```

```
<xs:complexType name="C2cMessageSubscription">
```

```
<xs:sequence>
```

```
<!-- skipping fields -->
```

```
<xs:element name="subscriptionAction" type="SubscriptionAction"/>
```

```
<!-- skipping fields -->
```

```
</xs:sequence>
```

```
</xs:complexType>
```

```
<xs:complexType name="SubscriptionType">
```

```
<xs:sequence maxOccurs="10">
```

```
<xs:element name="subscriptionType-item" type="SubscriptionTypeItem"/>
```

note that this can specify multiple values

```
</xs:sequence>
```

```
</xs:complexType>
```

Descriptive Name: SubscriptionTypeItem

```
<xs:simpleType name="SubscriptionTypeItem">
```

```
<xs:annotation>
```

```
<xs:appinfo>
```

```
reserved (0)
```

```
oneTime (1)
```

```
periodic (2)
```

```
onChange (3)
```

```
</xs:appinfo>
```

```
</xs:annotation>
```

```
<xs:union>
```

```
<xs:simpleType>
```

```
<xs:restriction base="xs:unsignedInt">
```

```
<xs:minInclusive value="0"/>
```

```
<xs:maxInclusive value="3"/>
```

```
</xs:restriction>
```

```
</xs:simpleType>
```

```
<xs:simpleType>
```

```
<xs:restriction base="xs:string">
```

```
<xs:enumeration value="reserved"/>
```

```
<xs:enumeration value="oneTime"/>
```

```
<xs:enumeration value="periodic"/>
```

```
<xs:enumeration value="onChange"/>
```

```
</xs:restriction>
```

```
</xs:simpleType>
```

```
</xs:union>
```

```
</xs:simpleType>
```

The use of the subscriptionType-item element allows multiple values for this field to be specified.

The schema should be modified to be:

Descriptive Name: C2CMessageSubscription

```
<xs:element name="c2cMessageSubscription" type="C2cMessageSubscription"/>
```

```
<xs:complexType name="C2cMessageSubscription">
```

```
<xs:sequence>
```

```
<!-- skipping fields -->
```

```
<xs:element name="subscriptionAction" type="SubscriptionTypeItem"/>
```

```
<!-- change the field type -->
```

Comments

```
<-- skipping fields -->
</xs:sequence>
</xs:complexType>
OR
<xs:complexType name="SubscriptionType">
<xs:sequence>
<-- drop the maxOccurs -->
<xs:element name="subscriptionType-item" type="SubscriptionTypeItem"/>
</xs:sequence>
</xs:complexType>
```

Resolution: Comment Status: Closed Disposition: Accepted

There was an error in the included C2C.xsd file. For `<xs:element name="c2cMessageSubscription" type="C2cMessageSubscription"/>`, remove the line `<xs:sequence maxOccurs="10">` after `<xs:complexType name="SubscriptionType">`.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1162	UC110	Patrick Powell			Version 3.0	

Comment: The tmdd.wsdl file has the following data types and operations defined:

```
<message name="MSG_CCTVInventoryUpdate">
  <part name="c2cMsgAdmin" element="c2c:c2cMessagePublication"/>
  <part name="message" element="tmdd:cCTVInventoryMsg"/>
</message>
<portType name="tmddECSoapHttpServicePortType">
<!-- ***** -->
<!-- EXTERNAL CENTER Operation PortType -->
<!-- ***** -->
<!-- CCTV -->
<operation name="DICCTVInventoryUpdate">
  <input message="tns:MSG_CCTVInventory"/>
  <output message="tns:MSG_ConfirmationReceipt"/>
  <fault name="errorReport" message="tns:MSG_ErrorReport"/>
</operation>
```

The input message type should be MSG_CCTVInventoryUpdate as shown below:

```
<message name="MSG_CCTVInventoryUpdate">
  <part name="c2cMsgAdmin" element="c2c:c2cMessagePublication"/>
  <part name="message" element="tmdd:cCTVInventoryMsg"/>
</message>
<portType name="tmddECSoapHttpServicePortType">
<!-- ***** -->
<!-- EXTERNAL CENTER Operation PortType -->
<!-- ***** -->
<!-- CCTV -->
<operation name="DICCTVInventoryUpdate">
  <input message="tns:MSG_CCTVInventoryUpdate"/>
  <output message="tns:MSG_ConfirmationReceipt"/>
  <fault name="errorReport" message="tns:MSG_ErrorReport"/>
</operation>
```

The following operations have a similar type mismatch.

```
<operation name="DICCTVInventoryUpdate">
<operation name="DICCTVStatusUpdate">
<operation name="DIDMSInventoryUpdate">
<operation name="DIDMSMessageInventoryUpdate">
<operation name="DIDMSStatusUpdate">
<operation name="DIDetectorDataUpdate">
<operation name="DIDetectorInventoryUpdate">
<operation name="DIDetectorStatusUpdate">
<operation name="DIESSInventoryUpdate">
<operation name="DIESSStatusUpdate">
<operation name="DIFullEventUpdateUpdate">
<operation name="DIGateControlScheduleUpdate">
<operation name="DIGateInventoryUpdate">
<operation name="DIGateStatusUpdate">
<operation name="DIHARControlScheduleUpdate">
<operation name="DIHARInventoryUpdate">
<operation name="DIHARStatusUpdate">
<operation name="DIIntersectionSignalControlScheduleUpdate">
<operation name="DIIntersectionSignalInventoryUpdate">
<operation name="DIIntersectionSignalStatusUpdate">
<operation name="DILCSControlScheduleUpdate">
<operation name="DILCSInventoryUpdate">
<operation name="DILCSStatusUpdate">
<operation name="DIRampMeterControlScheduleUpdate">
<operation name="DIRampMeterStatusUpdate">
<operation name="DISectionStatusUpdate">
<operation name="DIVideoSwitchInventoryUpdate">
<operation name="DIVideoSwitchStatusUpdate">
```

Resolution: Comment Status: Closed Disposition: Accepted

The type mismatch has been corrected in TMDD v3.01.

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Comments

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1163	UC110	Patrick Powell			Version 3.0	Volume 2, Section 3.4.10.4

Comment: From TMDD V3 Vol 2, Section 3.4.10.4 - Time-offset-utc.

Time zone offset for local time from UTC. For mat as: -HHMM or +HHMM according to hemisphere. Plus refers to a western hemisphere offset and minus to the eastern hemisphere. HH hour (-11 to +11); MM minutes (00 to 59).

Note: this differs from the accepted use of timezone offsets from UCT. The offset should be -HHMM in the Western hemisphere, i.e. if it is 13:00 AM in London and the UCT offset for San Diego is UCT-08, then it would be 5:00 in San Diego.

Resolution: Comment Status: Closed Disposition: Accepted

Redefined the valid range for time-offset-utc to -1400 to +1200 in TMDD v3.01.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1164	UC110	Patrick Powell			Version 3.0	

Comment: The TMDD Ver3 Vol1 and Vol2 have needs and requirements to support the Publish/Subscribe Message sets. However, in TMDD Ver3 Vol2 explicit messages sets to support Publish/Subscribe for RampMeterStatus, RampMeterInventory, RampMeterControlSchedule, and the support for RampMeterPlanInventory appears to erroneous.

While in the tmdd.wsdl there is an indication that the DeviceInformationRequest message could be used for this purpose it is not explicitly stated as such.

A simple solution to this is to create explicit subscription messages and add them to the TMDD message set:

Resolution: Comment Status: Closed Disposition: Rejected

Respectfully disagree.

As you noted, the traceability for needs and requirements is in Volume 1 in the Needs-Requirements Traceability Matrix (NRTM). The traceability between the requirements and the design is in Volume 2 in the Requirements Traceability Matrix (RTM).

Using the RTM, looking at Requirement ID 3.3.6.10.1.3, Subscribe to Ramp Meter Inventory Information as an example, the table points to dlDeviceInformationSubscription as the dialog necessary to fulfill this requirement - so it is explicit.

As a note, language will be added in the proposed Version 3.01 of the TMDD to state that if there are any discrepancies between the standard (document) and the .xsd or WSDL files, the standards document will take precedence.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1165	UC110	Patrick Powell			Version 3.0	

Comment: The need for the following Ramp Meter Control Messages is clearly presented in the TMDD V3 Volume 1. However, the RampMeterCancelControlRequest and RampMeterControlStatusRequest

RampMeterControlRequest
input: RampMeterControlRequestMsg
output: DeviceControlResponseMsg
fault: ErrorReport

RampMeterCancelControlRequest:
input: DeviceCancelControlRequestMsg
ouput: DeviceControlResponseMsg

RampMeterControlStatusRequest
input: DeviceControlStatusRequestMsg
output: DeviceControlResponseMsg
fault: ErrorReport

These have been added as shown:

```
<operation name="DIRampMeterControlRequest">  
<input message="tns:MSG_RampMeterControlRequest"/>  
<output message="tns:MSG_DeviceControlResponse"/>  
<fault name="errorReport" message="tns:MSG_ErrorReport"/>  
</operation>
```

```
<operation name="DIRampMeterCancelControlRequest">  
<input message="tns:MSG_DeviceCancelControlRequest"/>  
<output message="tns:MSG_DeviceControlResponse"/>  
<fault name="errorReport" message="tns:MSG_ErrorReport"/>  
</operation>
```

```
<operation name="DIRampMeterControlStatusRequest">  
<input message="tns:MSG_DeviceControlStatusRequest"/>  
<output message="tns:MSG_DeviceControlResponse"/>  
<fault name="errorReport" message="tns:MSG_ErrorReport"/>  
</operation>
```

```
<operation name="DIRampMeterControlRequest">  
<soap:operation soapAction="DIRampMeterControlRequest" style="document"/>  
<input> <soap:body use="literal"/> </input>  
<output> <soap:body use="literal"/> </output>  
<fault name="errorReport"> <soap:body use="literal"/> </fault>  
</operation>
```

```
<operation name="DIRampMeterCancelControlRequest">  
<soap:operation soapAction="DIRampMeterCancelControlRequest" style="document"/>  
<input> <soap:body use="literal"/> </input>  
<output> <soap:body use="literal"/> </output>  
<fault name="errorReport"> <soap:body use="literal"/> </fault>  
</operation>
```

```
<operation name="DIRampMeterControlStatusRequest">  
<soap:operation soapAction="DIRampMeterControlStatusRequest" style="document"/>  
<input> <soap:body use="literal"/> </input>  
<output> <soap:body use="literal"/> </output>  
<fault name="errorReport"> <soap:body use="literal"/> </fault>  
</operation>
```

Resolution: Comment Status: Closed Disposition: Accepted

The user may be using an older version of the tmdd.xsd and tmdd.wsdl file. There was a point (over several months) where a draft version of the XML schema files was on the ITE website. Checked the current version of the XML schema files against

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Comments

volume 2, and the entries are consistent.

The correct version does include a `dlRampMeterControlRequest`.

However, there is no `dlRampMeterCancelControlRequest` and `dlRampMeterControlStatusRequest`. Looking at the Requirements Traceability Matrix (RTM) in Volume 2 - under the requirements for 3.3.6.10.4, Request Ramp Meter Control Status; and 3.3.6.10.5, Cancel Control Requests for Remote Ramp Meter, the requirements point to `deviceControlStatusRequestMsg` and `deviceCancelControlRequestMsg`, respectively. However, the RTM is incorrect - the requirements should point to `dlDeviceCancelControlRequest` and to `dlDeviceControlStatusRequest`, respectively. This will be corrected in the proposed TMDD v3.01.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1166	UC110	Patrick Powell			Version 3.0	

Comment: Several of the operations such as DIRampMeterInventoryRequest return a data type which contains a list of the requested information.

```
From tmdd.wsdl:
<!-- RAMPMETER -->
<operation name="DIRampMeterInventoryRequest">
  <input message="tns:MSG_DeviceInformationRequest"/>
  <output message="tns:MSG_RampMeterInventory"/>
  <fault name="errorReport" message="tns:MSG_ErrorReport"/>
</operation>
<message name="MSG_RampMeterInventory">
  <!-- RAMPMETER Messages -->
  <part name="message" element="tmdd:rampMeterInventoryMsg"/>
</message>
From TMDD.xsd
<!-- -->
<!-- RampMeterInventory Message -->
<!-- -->
<xs:element name="rampMeterInventoryMsg">
  <xs:annotation>
  <xs:documentation>
  <objectClass>RampMeter</objectClass>
  <requirement>REQ1137</requirement>
  </xs:documentation>
  </xs:annotation>
  <xs:complexType>
  <xs:sequence maxOccurs="10240">
  minOccurs ???
  <xs:element name="ramp-meter-inventor y-item" type="RampMeterInventor y"/>
  </xs:sequence>
  </xs:complexType>
</xs:element>
```

If a system has zero entries for a query, i.e. - no Ramp Meters, then zero RampMeterInventory items may be returned. This is not an error, which would require a Fault message to be returned, but is a normal condition for a system with no Ramp Meters.

The TMDD.xsd should be modified to reflect this:

```
From TMDD.xsd
<!-- -->
<!-- RampMeterInventory Message -->
<!-- -->
<xs:element name="rampMeterInventoryMsg">
  <xs:annotation>
  <xs:documentation>
  <objectClass>RampMeter</objectClass>
  <requirement>REQ1137</requirement>
  </xs:documentation>
  </xs:annotation>
  <xs:complexType>
  <xs:sequence maxOccurs="10240"
  minOccurs="0">
  <xs:element name="ramp-meter-inventory-item" type="RampMeterInventory"/>
  </xs:sequence>
  </xs:complexType>
</xs:element>
```

Resolution:	Comment Status: Closed	Disposition: Accepted
-------------	------------------------	-----------------------

A similar condition occurs with other "device" stations, such as detectors and environmental sensor stations. Made a change to allow device stations to have "zero" devices defined for that station. As, stated, this change was made because device stations can temporarily have no devices, e.g., due to construction activities.

Comments

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1167	UC110	Patrick Powell			Version 3.0	

Comment: The DLRampMeterControlStatusRequest message has the following definition in the tmdd.wsdl and TMDD.xsd files:

```
<operation name="DIRampMeterControlStatusRequest">
  <input message="tns:MSG_DeviceControlStatusRequest"/>
  <output message="tns:MSG_DeviceControlResponse"/>
  <fault name="errorReport" message="tns:MSG_ErrorReport"/>
</operation>
<message name="MSG_DeviceControlStatusRequest">
  <part name="message" element="tmdd:deviceControlStatusRequest"/>
</message>
<message name="MSG_DeviceControlResponse">
  <part name="message" element="tmdd:deviceControlResponseMsg"/>
</message>

<xs:element name="deviceControlResponseMsg" type="DeviceControlResponse">
</xs:element>

<!-- -->
<!-- DeviceControlStatusRequest Data Frame -->
<!-- -->
<xs:complexType name="DeviceControlStatusRequest">
  <xs:annotation>
  <xs:sequence>
    <xs:element name="authentication" type="Authentication" minOccurs="0">
    </xs:element>
    <xs:element name="organization-requesting" type="OrganizationInformation">
    </xs:element>
    <xs:element name="device-id" type="Organization-resource-identifier">
    </xs:element>
    <xs:element name="request-id" type="Organization-resource-identifier">
    </xs:element>
    <xs:any namespace="##other" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>
<!-- -->
<!-- DeviceControlResponse Data Frame -->
<!-- Also used to CancelControlResponse -->
<!-- -->
<xs:complexType name="DeviceControlResponse">
  <xs:sequence>
    <xs:element name="organization-information" type="OrganizationInformation">
    </xs:element>
    <xs:element name="device-id" type="Organization-resource-identifier">
    </xs:element>
    <xs:element name="request-id" type="Organization-resource-identifier">
    </xs:element>
    <xs:element name="operator-id" type="Organization-resource-identifier"
    minOccurs="0"> </xs:element>
    <xs:element name="operator-lock-id" type="Organization-resource-identifier"
    minOccurs="0"> </xs:element>
    <xs:element name="request-status" type="Device-acknowledge-control">
    </xs:element>
    <xs:element name="operator-last-revised" type="Organization-resource-name"
    minOccurs="0"> </xs:element>
    <xs:any namespace="##other" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>
```

Part of the Needs and Requirements in TMDD V3 Volume 1 is the need to determine if there are any pending control requests. The message set specified by the tmdd.wsdl and TMDD.xsd only returns a single value rather than a list of values. In addition, if there is no pending control activity matching the one specified in the MSG_DeviceControlStatusRequest input then it is certain how to respond. A simple modification of the tmdd.wsdl and TMDD.xsd will allow a list of values to be returned.

Comments

```
tmdd.wsdl:
<operation name="DIRampMeterControlStatusRequest">
<input message="tns:MSG_DeviceControlStatusRequest"/>
<output message="tns:MSG_DeviceControlResponses"/>
<fault name="errorReport" message="tns:MSG_ErrorReport"/>
</operation>
<message name="MSG_DeviceControlResponses">
<part name="message" element="tmdd:deviceControlResponsesMsg"/>
</message>
```

```
TMDD.xsd
<!-- -->
<!-- DeviceControlResponses Message (list) -->
<!-- -->
<xs:element name="deviceControlResponsesMsg" type="DeviceControlResponses">
<xs:annotation>
<xs:documentation>
Added to allow list of DeviceControlResponses to be returned
</xs:documentation>
</xs:annotation>
</xs:element>
<!-- List of DeviceControlResponses Data Frame -->
<xs:complexType name="DeviceControlResponses">
<xs:sequence minOccurs="0" maxOccurs="1024">
<xs:element name="device-control-response-entry" type="DeviceControlResponse"/>
</xs:sequence>
</xs:complexType>
```

Similarly, in order to allow a wild-card request some way to specify this is needed. This can be done semantically by allowing a special value to represent a wild card.

```
<device-id>*</device-id> <!-- wildcard match -->
<request-id>*</request-id> <!-- wildcard match -->
```

Resolution: Comment Status: Closed Disposition: Rejected
The user need is to allow an external center to 1. request control of another owner center's device, 2. check the status of the external center's request, and 3. if necessary, cancel the external center's request.

The user need is NOT to allow the external center to view requests from other centers - only its own requests.

Thus the assumptions are that 1. the external center will 'remember' its 'unique sequence (or request) number', 2. it can only find the status of that specific request, 3. the owner center will track the status all external center requests (and the assigned unique sequence number) for a reasonable period of time.

Based on the above, there is no need to return multiple values - it is assumed that the external center will send only 1 (or a small number) request to a single device, and no wildcards need to be supported.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1168	UC110	Patrick Powell			Version 3.0	

Comment: The RampMeterStatusMsg has several fields that appear to be derived from values in NTCIP-1207V0117a - Object Definitions for Ramp Meter Control (RMC) Units. and NTCIP 1201 v02.26 - Global Object Definitions.

Missing NTCIP enumerated values:

As an example, the meter_operational_mode element in the TMDD.xsl file has type ntcip:RmcRequestAction.

NTCIP-References.xsd:

```
<xs:simpleType name="RmcRequestAction">
<xs:restriction base="xs:integer"/>
</xs:simpleType>
```

From the NCTIP 11207v0117 standard, we have:

rmcRequestAction OBJECT-TYPE

SYNTAX INTEGER {

dark (1),

restInGreen (2),

fixedRate (3),

trafficResponsive (4),

emergencyGreen (5)

}

ACCESS read-only

STATUS mandatory

DESCRIPTION

"

Indicates the action that is requested for this metered lane. The

values are:

dark - indicates that the metered lane is requested to advance to the Pre- Metering Non-Green interval.

restInGreen - indicates that the metered lane is requested to advance to the Pre-Metering Green interval.

fixedRate - indicates that the metered lane is requested to operate using the value of the rmcRequestRate-object.

trafficResponsive -indicates that the metered lane is requested to operate using mainline station traffic conditions and the value of the rmcRequestPlan-object.

emergencyGreen - indicates that the metered lane is requested to advance to the Shutdown Warning interval without entering the Shutdown Green, Shutdown Yellow or Shutdown Red intervals when the metered lane is NOT in the Non-metering state. The metered lane will advance to the Pre-Metering Green interval when the metered lane is in the Non-metering state.

"

REFERENCE

"See Clause A.3"

::={ rmcMeterStatEntry 7 }

Suggested Schema:

```
<xs:simpleType name="RmcRequestAction">
<xs:union>
<xs:simpleType>
<xs:restriction base="xs:int">
<xs:minInclusive value="1"/>
<xs:maxInclusive value="5"/>
</xs:restriction>
</xs:simpleType>
<xs:simpleType>
<xs:restriction base="xs:string">
<xs:enumeration value="dark"/>
```

Comments

```
<xs:enumeration value="restInGreen"/>
<xs:enumeration value="fixedRate"/>
<xs:enumeration value="trafficResponsive"/>
<xs:enumeration value="emergencyGreen"/>
</xs:restriction>
</xs:simpleType>
<xs:simpleType>
<xs:restriction base="xs:string">
<xs:enumeration value="insert-extension-values-here"/>
</xs:restriction>
</xs:simpleType>
</xs:union>
</xs:simpleType>
```

Resolution:

Comment Status: Closed

Disposition: Rejected

Where applicable the TMDD Standard references other standards normatively, in this case, NTCIP 1207.

There is thus no reason to create an XML schema for another standard. This may introduce inconsistencies between the TMDD and the other standard. If the other standards group makes multiple changes, which may be possible during a release of a new version, the TMDD will be inconsistent with the standard, and rather than update the TMDD schema, the TMDD only needs to update the reference to the new version number.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1174	UC111	Patrick Powell			Version 3.0	

Comment: Metering rate values are used or supplied in several places in the WSDL Schema and associated Schema files:

```
TMDD.xsd:
<&!-- -->
<&!-- Meter-rate_rate -->
<&!-- -->
<xs:simpleType name="Meter-rate">
<xs:annotation>
<xs:documentation>
<objectClass>RampMeter</objectClass>
<valueDomainTerm>rt</valueDomainTerm>
<units>vehicles per hour</units>
</xs:documentation>
</xs:annotation>
<xs:restriction base="xs:unsignedInt">
<xs:minInclusive value="120"/>
<xs:maxInclusive value="1800"/>
</xs:restriction>
</xs:simpleType>
```

The values are restricted to a range of 120 to 1800 vehicles per hour. However, it is unclear if this is a per-metered lane rate or a per-rampmeter rate. In addition, there is an issue when the actual metering rate is 0 (zero), i.e. metering is not active. This could happen in Traffic Responsive Mode when the Traffic Responsive operation decides to temporarily stop metering. In this case the RampMeter is still operational, but the metering rate is zero.

To resolve this issue, the restriction should be either modified or removed:

```
TMDD.xsd:
<&!-- -->
<&!-- Meter-rate_rate -->
<&!-- -->
<xs:simpleType name="Meter-rate">
<xs:annotation>
<xs:documentation>
<objectClass>RampMeter</objectClass>
<valueDomainTerm>rt</valueDomainTerm>
<units>vehicles per hour</units>
</xs:documentation>
</xs:annotation>
<xs:restriction base="xs:unsignedInt">
<xs:maxInclusive value="10000"/>
</xs:restriction>
</xs:simpleType>
```

Resolution:	Comment Status: Closed	Disposition: Accepted
The values are per metered lane.		

This simpleType was replaced by NTCIP 1207 objects, which have valid ranges from 0 to 65535.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1175	UC112	Raman Patel	Version 3.0 - Volume 1		Version 3.0	

Comment: •Page 12, ETMC should be only be EC
•Page 11,As shown in Fig 3, not Fig 4
•Page 17, very bottom, Add section 2.3.6.1over Need to share T D D...it is missing
•Volume I, Section 4 on ARCH, v6, should we update?

Resolution: Comment Status: Closed Disposition: Accepted

1. Correction made.
2. Correction made.
3. Correction made.
4. Updated to National ITS Architecture v6.1.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1177	UC113	Raman Patel	Version 3.0 - Volume 2		Version 3.0	

Comment: •RTM Headings need to say which Volumes clauses referrer to? First column should say Volume I, last is Volume II.
•RTM contains only dialogs, NOT pattern as implied in Volume I, page 32, section 2.3.3
•Para should be rewritten to differentiate between pattern and dialog
•Page 38, Volume I needs to revisited on NTCIP 8004, also NTCIP 1103 and naming conventions
•Diagram on page 26, Fig 1, connection between Req and Dialogs is NOT direct, we want RTM to do that. I think it is not needed. (NOBLIS also had similar comment)
•Same as above in Volume I, Figure 1, all three solid lines to DC are Not needed, they are thru RTM
•Fig 2, XML should be first, then DATEX
•I am not able to recall, where some xml data elements had errors in numbering, can't be that critical
•The word Operational Needs is missing in ConOps Volume I. If Ok, we should discuss part of Op Env a bit more.

Resolution: Comment Status: Closed Disposition: Accepted

- A. See Comment 1195.
- B. See Comment 1195.
- C. Added definitions of pattern and dialog in Volume 1.
- C. The updated versions of NTCIP 8004 (NTCIP 8004 v2) and NTCIP 1104 (NTCIP 1104 v01.09r) should have no impact to TMDD v3.01.
- D. The figure has been updated.
- E. The figure has been updated.
- f. I assume you mean figure 2 in volume 1. No sequence is implied, but if there is, DATEX-ASN application profile would still be first.
- G. Corrections have been made to the XML schema files.
- H. The introduction sections in Volume 1 has been updated and includes discussion on operational needs.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1178	UC114	Blake Christie		28	Version 3.0	Section 2.1

Comment: It appears that the TMDD v3 design solution is not complete in regard to the TMDD.xsd file for the following reasons:

- 1.Volume II Section 2.1.1 states that the TMDD.xsd electronic file is normative to the standard and hence its reference to NTCIP-References.xsd is normative.
- 2.NTCIP-References.xsd contains incomplete and inaccurate, data element descriptions for device dependent objects (e.g. NTCIP 1203 DmsMessageMultiString).
- 3.TMDD STANDARD FOR TRAFFIC MANAGEMENT CENTER-TO-CENTER COMMUNICATIONS Volume I:Concept of Operations and Requirements, Section 1.6.1 (Page 7) states:
"All functional requirements already supported by this standard must be implemented as defined by the standard. An implementation may NOT define a new data element or data message if that functional requirement is already supported by this standard. In other words, the implementation may NOT completely replace a partially incomplete feature of the standard with a complete custom feature."

Therefore:

It is unclear how the implementer is to deal with the data elements contained in the NTCIP-References.xsd file.

Several options come to mind and are:

- A)The TMDD WG can correct and publish the NTCIP-References.xsd file with accurate data element descriptions.
- B)Each implementer can generate their own version of NTCIP-References.xsd file to bridge the gap between the TMDD and the external devices referenced. This approach will create interoperability issues and violates reason #3 above.
- C)The TMDD WG can develop a standard referencing mechanism to bridge from the NTCIP-References.xsd file to individual device schemas (e.g. ASC.xsd, DMS.xsd). This is preferred.

Please provide direction on how to close this interoperability gap. This issue may have been previously identified however the resolution does not provide guidance on how the standard is intended to be implemented (see Exhibit A below)

Resolution: Comment Status: Closed Disposition: Accepted
The data element descriptions and ranges in the NTCIP-References.xsd has been updated. The specific version of each referenced standard has also been added and updated in TMDD Volume 1, Section 1.5.1, Normative References, and added as a comment in the NTCIP-References.xsd file.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1179	UC114	Blake Christie			Version 3.0	

Comment: Which files are considered to be "inside" the standard and cannot be changed by implementers? Which files are considered to be "outside" the standard and can be changed by implementers? Are implementers prohibited from changing the files "inside" the standard in order to maintain interoperability? Is there an intended approach to incorporating extensions into the files "outside" the standard so that there is uniformity in how extensions are integrated with the standard?

Resolution: Comment Status: Closed Disposition: Accepted

In Volume II, Section 2.1.1, The electronic design files of the TMDD are normative to the standard. These electronic design files contain the source design of the TMDD used in developing Volume II. These electronic files have been verified using software tools to be correct ASN.1, WSDL and XML Schema syntax.

A discussion of the extensions is in Volume I, Section 1.8.1 Extensions, It is recognized that the standard does not define standardized data concepts for every possible user need that can exist between two centers. The TMDD allows specific project implementations to "extend" or add new data concepts to the implementation. As a result, there could be special features or requirements in the implementation that are not supported by the standard. If such features are present, then the systems developer or integrator need to determine precisely how these features are to be supported without conflicting with the standardized implementations.

"Extensions" to a TMDD conformant implementation are discouraged because they break interoperability. However, the standards organizations recognize the need to satisfy functional requirements not supported by this standard.

To support these additional requirements, project implementations may need to "extend" the standard by defining new dialogs, data elements, data frames, or data messages that are not contained in this TMDD standard. This implementation will not be compliant to the standard, but can be in conformance to the standard. This allows the systems to maintain interoperability for those data exchanges that are conformant and available. To be consistent with this standard, the following rules for "extending" the TMDD standard must be met:

1.No Substitutions: All functional requirements already supported by this standard must be implemented as defined by the standard. An implementation may NOT define a new data element, message, or dialog if that functional requirement is already supported by this standard. In other words, the implementation may NOT completely replace a partially incomplete feature of the standard with a complete custom feature.

2.New data elements: An implementation may add new data elements beyond those data elements defined by the standard. However, an extension cannot reuse an existing name or identifier already defined by the standard.

3.Additional enumerations: Where additional enumerations are required, a new object shall be created for the new enumerations. The new object is to be used only for the new enumerations; where the concepts conveyed are identical to the standard object, the original object shall be used.

4.Range modification: Extending the range of an existing data element requires that the data element be renamed.

5.Meaning of data elements: If an implementation has a different interpretation of the meaning of a data element or how the data element is to be used as defined by this standard, a new data element must be created for that interpretation.

6.Documentation of extensions: Any extensions shall be documented by the owning agency(ies) and/or the systems integrator in the XML schema and in ASN.1 notation. Further, such extensions shall be documented including user needs being addressed and the specific requirements that are to be satisfied by the extensions and the documentation shall maintain traceability (needs to requirements to design content) in a manner consistent with the presentation in the standard.

7.New messages: If extensions are made to a message defined by the standard, whether through the addition of data elements to the message or changes to an existing data element, that message shall be renamed to prevent confusion or ambiguity for the purposes of interoperability.

8.Message processing: A conformant receiving center must ignore any attributes or elements in a message that it does not recognize but shall process what it understands.

9.Naming conventions: All names, whether new or a renaming, shall conform to the TMDD naming conventions.

10.Dialogs: Extensions may not modify the dialogs contained in the standard. Where necessary, new dialogs shall be added to support the extensions and such dialogs shall be documented in a manner which is consistent with this standard (See Volume II, Sections 2.3, 2.4, and 3.0).

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1180	UC114	Blake Christie			Version 3.0	

Comment: All operations defined in the file violate the NTCIP 2306 V0169r normative requirements for operation names to be prefixed with the string "OP_" as defined in 7.1.1.b, 8.1.1.d, 8.2.1 (direct reference to 7.1.1), 9.1.2.a (indirect reference to 7.1.1.b).

Resolution: Comment Status: Open Disposition:

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1181	UC114	Blake Christie			Version 3.0	Volume 1: Section 1.6.1; Volume 2: Section 2.6

Comment: Should the standard explicitly state that expanding the enumerations of a TMDD specified data element is not considered an extension? Are expansions of device-dependent enumerated data elements, referred to through NTCIP References.xsd such as DmsMessageStatus, prohibited? Does extending a data element's enumerations imply that its range is extending?

Resolution: Comment Status: Closed Disposition: Accepted

The conformance statement was updated. Section 1.8.1, Extensions, was updated to: It is recognized that the standard does not define standardized data concepts for every possible user need that can exist between two centers. The TMDD allows specific project implementations to "extend" or add new data concepts to the implementation. As a result, there could be special features or requirements in the implementation that are not supported by the standard. If such features are present, then the systems developer or integrator need to determine precisely how these features are to be supported without conflicting with the standardized implementations.

"Extensions" to a TMDD conformant implementation are discouraged because they break interoperability. However, the standards organizations recognize the need to satisfy functional requirements not supported by this standard.

To support these additional requirements, project implementations may need to "extend" the standard by defining new dialogs, data elements, data frames, or data messages that are not contained in this TMDD standard. This implementation will not be compliant to the standard, but can be in conformance to the standard. This allows the systems to maintain interoperability for those data exchanges that are conformant and available. To be consistent with this standard, the following rules for "extending" the TMDD standard must be met:

- 1.No Substitutions: All functional requirements already supported by this standard must be implemented as defined by the standard. An implementation may NOT define a new data element, message, or dialog if that functional requirement is already supported by this standard. In other words, the implementation may NOT completely replace a partially incomplete feature of the standard with a complete custom feature.
- 2.New data elements: An implementation may add new data elements beyond those data elements defined by the standard. However, an extension cannot reuse an existing name or identifier already defined by the standard.
- 3.Additional enumerations: Where additional enumerations are required, a new object shall be created for the new enumerations. The new object is to be used only for the new enumerations; where the concepts conveyed are identical to the standard object, the original object shall be used.
- 4.Range modification: Extending the range of an existing data element requires that the data element be renamed.
- 5.Meaning of data elements: If an implementation has a different interpretation of the meaning of a data element or how the data element is to be used as defined by this standard, a new data element must be created for that interpretation.
- 6.Documentation of extensions: Any extensions shall be documented by the owning agency(ies) and/or the systems integrator in the XML schema and in ASN.1 notation. Further, such extensions shall be documented including user needs being addressed and the specific requirements that are to be satisfied by the extensions and the documentation shall maintain traceability (needs to requirements to design content) in a manner consistent with the presentation in the standard.
- 7.New messages: If extensions are made to a message defined by the standard, whether through the addition of data elements to the message or changes to an existing data element, that message shall be renamed to prevent confusion or ambiguity for the purposes of interoperability.
- 8.Message processing: A conformant receiving center must ignore any attributes or elements in a message that it does not recognize but shall process what it understands.
- 9.Naming conventions: All names, whether new or a renaming, shall conform to the TMDD naming conventions.
- 10.Dialogs: Extensions may not modify the dialogs contained in the standard. Where necessary, new dialogs shall be added to support the extensions and such dialogs shall be documented in a manner which is consistent with this standard (See Volume II, Sections 2.3, 2.4, and 3.0).

Version Comment Addressed: TMDD v3.01

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1182	UC114	Blake Christie			Version 3.0	LRMS Adopted 02 00 00.xsd

Comment: The following excerpt from the LRMS Adopted 02 00 00.xsd file distributed with the TMDD show the DSRC:country-code-text element was removed "to make the schema work." Why are the "removed" lines included in the file?

```
<!-- Descriptive Name: CountryCodetxt -->
<xs:simpleType name="CountryCode">
  <xs:restriction base="xs:string">
    <xs:minLength value="2"/>
    <xs:maxLength value="3"/>
  </xs:restriction>
  <!-- removed to make schema work:
    <xs:restriction base="DSRC:country-code-text"/>
  -->
</xs:simpleType>
<!-- Descriptive Name: Directioncd -->
<xs:simpleType name="Direction">
  <xs:annotation>
    <xs:appinfo>
      north (0)
      south (1)
      east (2)
      west (3)
      northeast (4)
      northwest (5)
      southeast (6)
      southwest (7)
    </xs:appinfo>
  </xs:annotation>
```

Resolution: Comment Status: Closed Disposition: Rejected

The original source of the LRMS-Adopted-02-00-00.xsd file included a fragment representation in the DSRC namespace, <xs:restriction base="DSRC:country-code-text"/>. However, this fragment is not referenced by TMDD v3.0 and is not needed, nor is the namespace (DSRC:), but the fragment was preventing validation of the XML Schema files, thus the fragment was commented out. The fragment was kept though to preserve the original source .xsdfile as closely as possible.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1183	UC114	Blake Christie			Version 3.0	LRMS Adopted 02 00 00.xsd

Comment: The schema element contains the version attribute set to DRAFT. Is this file a draft or final version? Does this value of DRAFT have any current or future operational impact?

Resolution: Comment Status: Closed Disposition: Rejected

The original source of the LRMS-Adopted-02-00-00.xsd file was a DRAFT version. An official XML Schema was never created by the standards working group, so there is no official, final version of the .xsd file.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1184	UC114	Blake Christie			Version 3.0	3.3.6.11.2.5.1.d (Vol I), 3.4.12.7.2 (Vol II)

Comment: Should preempt (for railroad, emergency vehicle, bridge) be in this list to cover non-flashing preempt operations? Since this list contains multiple flash entries by source of the flash should preempt also have multiple entries by source? Special function and coordinated alarm are not timing modes and should be dealt with outside of these timing modes as they can occur simultaneously to the timing modes. Some of the control modes don't include time-of-day operations. Are they assumed to be the defaults?

3.3.6.11.2.5.1.d Contents of the Intersection Status Information: Required Intersection Status Content: Current signal timing mode

3.3.6.11.2.5.2.2 Contents of the Intersection Status Information: Optional Intersection Status Content: Planned Signal Timing Mode Description

3.3.6.11.3.2.1.b Contents of Signal Control Request: Required Signal Control Request Content: Signal timing mode

3.3.6.11.3.3.2.2 Contents of Signal Control Response: Optional Signal Control Response Content: Timing Mode

3.3.6.11.8.5.1.e Contents of the Section Status Information: Required Section Status Content: Section timing mode

3.3.6.11.9.2.1.f Contents of Signal Section Control Response: Required Signal Section Control Request Content: Signal timing mode

3.3.6.11.9.3.2.3 Contents of Signal Section Control Response: Optional Signal Control Response Content: Timing Mode

3.3.6.11.12.5.1.k Contents of the Section Timing Pattern Schedule Information: Required Section Timing Pattern Schedule Content: Time base schedule day pattern timing mode

3.3.6.11.13.3.1.b Contents of the Signal Control Priority Queue Response: Required Signal Control Priority Queue Response Content: signal timing mode

3.3.6.11.14.3.1.b Contents of the Section Control Priority Queue Response: Required Section Control Priority Queue Response Content: section timing mode

Resolution: Comment Status: Closed Disposition: Accepted
 Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1185	UC114	Blake Christie			Version 3.0	3.3.6.11.2.5.1.d (Vol I), 3.4.12.7.2 (Vol II)

Comment: Should transit signal priority be in this list to cover transit operations?

Also in 3.3.6.11.2.5.1.d check trace from requirement to design 3.4.12.4.2

Resolution: Comment Status: Closed Disposition: Accepted
 Transit signal priority was added in TMDD v3.03.
 Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1186	UC114	Blake Christie		137	Version 3.0	Vol. 1: Section 3.3.6.11.2.5.2.2

Comment: The first sentence should reinforce that this description is for the "planned" signal timing mode to avoid confusion with the required content containing both planned and current signal timing modes. . Is there a requirement to set this description to a blank if the planned signal timing mode changes and the description becomes irrelevant?

Resolution: Comment Status: Closed Disposition: Accepted
 Updated the text to, "The owner center shall provide a textual description of the planned signal timing mode selected as part of the intersection status information for each signal."

A value is always expected for the planned signal timing mode. If the value of the planned signal timing mode changes, it is expected that the description will change as appropriate.
 Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1187	UC115	Patrick Powell			Version 3.0	

Comment: Due to temporary database inconsistencies, it is possible to have a unit flagged as a Ramp Meter but to have no metered lanes. This is common when due to construction activities the number of metered lanes is (temporarily) zero.

Rather than to not report the status of a Ramp Meter at all when it is in this condition it would seem better to simply allow a minOccurs="0" for the number of metered lanes for a ramp meter.

```
<xs:element name="ramp-meter-number-list">
  <xs:annotation>
    <xs:documentation>
      <requirement>REQ</requirement>
    </xs:documentation>
  </xs:annotation>
  <xs:complexType>
    ! <xs:sequence maxOccurs="24" minOccurs="0">
      <xs:element name="ramp-meter-number" type="RampMeterLaneControlDetails"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="ramp-meter-number-list">
  <xs:annotation>
    <xs:documentation>
      <requirement>REQ669</requirement>
    </xs:documentation>
  </xs:annotation>
  <xs:complexType>
    ! <xs:sequence maxOccurs="24" minOccurs="0">
      <xs:element name="ramp-meter-number" type="RampMeterInventoryDetails"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="ramp-meter-lane-list">
  <xs:annotation>
    <xs:documentation>
      <requirement>REQ662</requirement>
    </xs:documentation>
  </xs:annotation>
  <xs:complexType>
    ! <xs:sequence maxOccurs="24" minOccurs="0">
      <xs:element name="ramp-meter-lane" type="RampMeterLaneStatusDetails"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

Resolution: Comment Status: Closed Disposition: Accepted
Allow a ramp meter "station" to have no (ramp) metered lanes defined for that ramp meter "station". The same will be allowed for detector stations and ESS stations.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1188	UC115	Patrick Powell			Version 3.0	

Comment: The DIRampMeterControlRequest reply, DIRampMeterControlStatus and DIRampMeterCancelControl returned a tns:MSG_DeviceControlResponse object. This object had fields that reported the current status of the particular plan, but did not report any other information such as the requested meter_operational_mode, meter_rate, metering_plan.

The WSDL has been modified as follows.

(1) The DIRampMeterControlRequest, DIRampMeterControlStatus, and DIRampMeterCancelControl now expect a RampMeterControlResponses object as the return or output value:

tmdd.wsdl:

```
<operation name="DIRampMeterControlRequest">
<input message="tns:MSG_RampMeterControlRequest"/>
<output message="tns:MSG_RampMeterControlResponses"/>
<fault name="errorReport" message="tns:MSG_ErrorReport"/>
</operation>
<operation name="DIRampMeterCancelControlRequest">
<input message="tns:MSG_DeviceCancelControlRequest"/>
<output message="tns:MSG_RampMeterControlResponses"/>
<fault name="errorReport" message="tns:MSG_ErrorReport"/>
</operation>
<operation name="DIRampMeterControlStatusRequest">
<input message="tns:MSG_DeviceControlStatusRequest"/>
<output message="tns:MSG_RampMeterControlResponses"/>
<fault name="errorReport" message="tns:MSG_ErrorReport"/>
</operation>
<message name="MSG_RampMeterControlResponses">
<part name="message" element="tmdd:rampMeterControlResponsesMsg"/>
</message>
```

(2) The tns:MSG_RampMeterControlResponses element is a list of RampMeterControlResponses:

TMDD.xsd:

RampMeterControlResponses Message (list)

Wed Feb 9 13:16:03 PST 2011 Patrick Powell, Astart Technologies

```
<xs:element name="rampMeterControlResponsesMsg" type="RampMeterControlResponses">
```

```
<xs:annotation>
```

```
<xs:documentation>
```

```
Added to allow list of RampMeterControlResponses to be returned
```

```
</xs:documentation>
```

```
</xs:annotation>
```

```
</xs:element>
```

List of RampMeterControlResponses Data Frame

Also used for RampMeterCancelControlResponse

Wed Feb 9 13:16:03 PST 2011 Patrick Powell, Astart Technologies

```
<xs:complexType name="RampMeterControlResponses">
```

```
<xs:sequence minOccurs="0" maxOccurs="1024">
```

```
<xs:element name="ramp-meter-control-response-entry" type="RampMeterControlResponse"/>
```

```
</xs:sequence>
```

```
</xs:complexType>
```

(3) The RampMeterControlResponse type is created by extending the original DeviceControlResponse type. The RampMeter rate related information which was present in the original RampMeterControlRequest input is now returned as part of the response.

TMDD.xsd:

RampMeterControlResponse Data Frame

Also used for RampMeterCancelControlResponse

Wed Feb 9 13:16:03 PST 2011 Patrick Powell, Astart Technologies

This extends the basic DeviceControlResponse by adding RampMeterRate information

```
<xs:complexType name="RampMeterControlResponse">
```

```
<xs:annotation>
```

```
<xs:documentation>
```

```
<objectClass>Device</objectClass>
```

```
<requirement>REQ338</requirement>
```

```
</xs:documentation>
```

```
</xs:annotation>
```

```
<xs:complexContent>
```

Comments

```
<xs:extension base="DeviceControlResponse">
  <xs:sequence minOccurs="0">
    From RampMeterControlRequest
    Wed Feb 9 13:16:03 PST 2011 Patrick Powell, Astart Technologies
  <xs:choice>
    <xs:element name="ramp-meter-number-list">
      <xs:annotation>
        <xs:documentation>
          <requirement>REQ</requirement>
        </xs:documentation>
      </xs:annotation>
    <xs:complexType>
      <xs:sequence maxOccurs="24" minOccurs="0">
        <xs:element name="ramp-meter-number" type="RampMeterLaneControlDetails"/>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
  <xs:element name="ramp-meter-control-information" type="RampControlDetails">
    <xs:annotation>
      <xs:documentation>
        <requirement>REQ718</requirement>
      </xs:documentation>
    </xs:annotation>
  </xs:element>
</xs:choice>
  <xs:element name="request-rate" type="ntcip:RmcRequestRate" minOccurs="0">
    <xs:annotation>
      <xs:documentation>
        <requirement>REQ719</requirement>
      </xs:documentation>
    </xs:annotation>
  </xs:element>
  <xs:any namespace="##other" minOccurs="0"/>
</xs:sequence>
</xs:extension>
</xs:complexContent>
</xs:complexType>
```

Resolution:

Comment Status: Closed

Disposition: Rejected

The user need is to allow an external center to 1. request control of another owner center's device, 2. check the status of the external center's request, and 3. if necessary, cancel the external center's request.

The user need is NOT to allow the external center to view requests from other centers - only its own requests.

Thus, currently, the TMDD standard does not support allowing an external centers to view the requests of another external center (or the owner center). This was a deliberate decision.

However, t

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1189	UC116	Raman Patel			Version 3.0	

Comment: 1.Consider title change for this standard to reflect its domain and avoid use of acronym in the title:

From: TMDD Standard For Traffic Management Center To Center Communications

To: Traffic Management Data Dictionary Standard for Center-to-Center Communications

In the text, we can always shorten it as: TMDD v3.01standard.

Resolution:	Comment Status:Closed	Disposition: Accepted
Changed title and standard to be Traffic Management Data Dictionary Standard for Center-to-Center Communications. Made the same change in the text of the standard.		
Version Comment Addressed:		

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1190	UC116	Raman Patel			Version 3.0	

Comment: 2.Remove these terms, either they are in error or serve no purpose:

- ETMCC (this is old)
- Detailed Requirements (word Detailed, not SEP-speak)
- Functional requirements (functional aspects are only for devices), Figure 2, page 2, remove word functional requirements, say Requirements
- Design Content from documents (we are providing data concepts, so we stay with one term, not both). Volume II contains only DCs, so term Data Concepts is more suitable in Title than Design Content

Resolution:	Comment Status:Closed	Disposition: Accepted
a. Removed instances of ETMCC.		
B. Removed most instances of Detailed Requirements from the text.		
C. removed most instances of functional requirements from the text.		
D. Disagree with this comment. The systems engineering process does recognize the concept of and calls it Design. For the TMDD standard, the Design is in form of data concepts. So Design is a systems engineering term.		
Version Comment Addressed:		

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1191	UC116	Raman Patel			Version 3.0	

Comment: 3.Define each and Use these terms only: USER NEEDS (currently Section 2, Volume I reads Need), Requirements, Data Concepts, NRTM, RTM, Mandatory, Optional.
These terms are to be aligned with how we say things SEPwise.

Use term System Interface all along, remove Communications Interface (we use this in NTCIP)or Interface or C2C Interface. A standard must use as single term.

Resolution:	Comment Status:Closed	Disposition: Accepted
Changed to User Needs instead of Needs where appropriate. Used the term systems interface instead of communications interface.		
Version Comment Addressed:		

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1192	UC116	Raman Patel			Version 3.0	

Comment: 4.Also introduce a diagram to answer: Where does TMDD standard fit in SEP Life Cycle Development Process?(I can supply that from webinar slides)

Resolution:	Comment Status:Closed	Disposition: Accepted
Added Section 1.2, Approach, to Volumes 1 and 2. This section discusses the application of the systems engineering process to the standard, and includes the VEE systems engineering diagram (Figure 2) and shows where TMDD fits into the SEP.		
Version Comment Addressed:		

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1193	UC116	Raman Patel			Version 3.0	Volume 1

Comment: a.Operational Needs should be introduced at the beginning of ConOps section, OP needs are the reason why TMDD standard exists, we must say that upfront.
b.Introduce Traffic Management Operational Environment next
c.Then Nat ITS Architecture reference
d.Page 12, ETMC should be only be EC
e.Page 11,As shown in Fig 3, not Fig 4
f.Page 17, very bottom, Add section 2.3.6.1 over Need to share T D D...it is missing
g.Volume I, Section 4 on ARCH, v6, should we update? Should it be normative to 6.1? Probably not possible at this tim

Resolution: Comment Status:Closed Disposition: Accepted

a. added text and discussion on operational needs
b.Believe that the traffic management operational environment is sufficiently covered.
C. Believe the national ITS architecture is sufficiently covered.
D. change made.
E. change made.
F. Section added.
G. Will updated to Version 6.1. Among the updates to the U. S. National ITS Architecture Version 6.1 from Version 6.0 is improved support for the Clarus initiative and TMDD Version 3.0 via the addition of and minor changes to existing architecture flows.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1194	UC116	Raman Patel			Version 3.0	

Comment: 6.Volume I Reorganize as per:
Section 1 General [Informative]
1.1 Purpose of the TMDD Standard (Include text that speaks to standardized SI concept as outcome, missing now) (Purpose is to supply standardized definitions for User Needs and their Associated Requirements, and Data Concepts linked to those selected Requirements for use to design a system interface.
1.2 References
1.2.1 Normative Reference (now 1.5.1, add a row to make normative current 2.1, 2.4-2.7, 3.1-3.6) NTCIP 2304-2306 should be a separate row as normative, 1103v2 also). All NTCIP stds have new revs. TMDD v3 Guide should be added as informative next to NTCIP Guide reference
1.2.2 Other References
1.3 Terminology (Move)
1.4 Acronyms (Move)
1.5 Conditions for Extending Standard (Move)
1.6 Conditions for Conformance to Standard (There are 3 errors in current C Statement) (Move)
1.7 Backward Compatibility (Move)
1.8 Standard Documentation Organization (Move)
1.9 Revision History (Move)
1.10 Standards Availability and Standard Coordinator (New)
1.11 Standard Electronic Design Files Table (now 2.1.1) (Move)
1.12 Introduction to ISO 14817 and ASN.1 (now 2.1.2) (Move)
1.13 Introduction to WSDL and XML Schema (now 2.13) (Move)

Resolution: Comment Status:Closed Disposition: Rejected

While there are benefits for following the document organization to be more consistent with the NTCIP documents, TMDD v3.01 is just a maintenance update. However, some sections were reorganized to improve the "flow" of Section 1.

The references in the References section has been updated.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1195	UC116	Raman Patel			Version 3.0	Volume 2

Comment: 7. Volume-II: (should have same page format as Volume I), Drop Design content, Insert Data Concepts in Bold. NRTM and RTM are prized tools in TMDD. They should be updated with heading format similar to what we use in NTCIP RTM (see DMS, ESS, RM). No need to alter details, just headings row with yellow.

- a. RTM Headings need to say which Volumes clauses referer to? First column should say Volume I, last is Volume II. Currently a reader has to figure out.
- b. RTM contains only dialogs, NOT pattern as implied in Volume I, page 32, section 2.3.3.
 - o The word pattern is extra and is not needed. NTCIP 2304 and 2306 by any means NOT patterns or dialogs, they have their mechanics and no need to introduce this way. Both protocols should be properly introduced or Not at all.
 - o All of us know that TMDD can be implemented without one protocol, and yet nothing is said to what happens to TMDD? We need a narrative as tutorial somewhere.
 - o A para should be written to differentiate between pattern and dialog. Pattern is not a technical term, is it? (I checked 14817 and IEEE lit, not used anywhere)
- c. Page 38, Volume I needs to be revisited on NTCIP 8004, also NTCIP 1103 and naming conventions, things have changed.
- d. Diagram on page 26, Fig 1, connection between Requirements and Dialogs is NOT direct, we want RTM to do that. I think it is not needed. (NOBLIS also had similar comments). These diagrams are not readable and needs updating, I can supply that.
- e. Same as above in Volume I, Figure 1, all three solid lines to DCs are not needed, they are thru RTM only.
- f. Fig 2, XML should be first, then DATEX
- g. I am not able to recall, where some xml data elements had errors in numbering, can't be that critical
- h. ASN.1 Object Classes 23 of them, Section 3.5, Volume II, what are they for? Explain somewhere their use or remove. We have already arranged Device Classes for REQ and dialogs and messages.
- i. There is NO published NTCIP standard on HAR. Yet, NTCIP 1201 referred in RTM with HAR, that means only for configuration-schedule etc., but not real control or sharing devices, without NTCIP HAR. Bob, has anyone used HAR this way, think about it.

Resolution: Comment Status: Closed Disposition: Accepted
1. The systems engineering term is Design. The design for this standard happens to currently be data concepts, so no change was made for this.

Note: maybe. Harder to build but maybe easier to use.

A. The text before the RTM clearly indicates that the requirements ID are in Volume 1, and that the design ID is in volume 2. NOTE: maybe in the heading.

B. The dialogs in TMDD v3.0 are made of message patterns. A message pattern describes how two different parts of a message passing system, in the case of TMDD an Owner Center and External Center, connect and communicate with each other. The dialogs describe what message pattern is used and what messages are sent/received. Note

C. The updated versions of NTCIP 8004 (NTCIP 8004 v2) and NTCIP 1104 (NTCIP 1104 v01.09r) should have no impact to TMDD v3.01.

D. The figure has been updated.

E. The figure has been updated.

f. I assume you mean figure 2 in volume 1. No sequence is implied, but if there is, DATEX-ASN application profile would still be first.

G. Corrections have been made to the XML schema files.

H. ISO 14817 defines an object class as a description of a set of objects that share the same properties, relationships and semantics within a given domain of discourse about which there is a need to represent some information.

i. Agreed that there is no standard for HAR, but there is no reason why existing NTCIP objects, such as 1201, cannot be used for other devices. The alternative is to create new data elements that implementations would have to conform to anyway, so why not use an existing data object that already exists.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1196	UC116	Raman Patel			Version 3.0	

Comment: 8. Consider these diagrams concepts available for Use in ConOp Section on TMDD with Modified format or as is. Diagrams can be further designed as needed. (In NTCIP standards, DMS, ESS, RM we have included some useful concepts with illustration to be-unscientific. After all if no one understands the underlying concepts, discussion is not helpful.)

(This will give a fresh look to our documentation and perhaps additional clarity)

- What is a SI? How TMDD is used or why we need TMDD?
- TMDD Volumes Relationship
- Where does TMDD fit on SEP V diagram....?
- Forward/Backward Compatibility with RTM

Resolution: Comment Status: Closed Disposition: Accepted
Added the definition of System Interface to the Terms and Definitions. Did not want to use the attached diagram because it is specific to SOAP. Updated the TMDD volumes relationship figure. Added an SEP V diagram showing where TMDD fits (Volume 1: Figure 2), The updated TMDD volumes relationship figure (figure 3) implies that traceability is both ways.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1197	UC115	Patrick Powell			Version 3.0	

Comment: In addition, the metering status information includes elements for meter-rate and metering plan. However, these are exclusive elements (i.e. - choice elements). However, the Caltrans Ramp Metering Software allows both the metering plan and rate to be set. The metering plan (AM or PM) sets the baseline values for the metering rate timing while the metering rate modifies the baseline values. By removing the choice element you can allow both or none to be present.

```
<xs:choice>
```

```
Wed Feb 9 13:16:03 PST 2011 Patrick Powell, Astart Technologies
```

```
Allow both metering-plan and meter-rate elements
```

```
<xs:element name="metering-plan" type="ntcip:RmcManualPlan" minOccurs="0">
```

```
<xs:annotation>
```

```
<xs:documentation>
```

```
--- 11002,11008 ----
```

```
</xs:documentation>
```

```
</xs:annotation>
```

```
</xs:element>
```

```
</xs:choice>
```

Resolution: Comment Status: Closed Disposition: No Longer Applica
The user may be using an older version of the tmdd.xsd and tmdd.wsdl file. There was a point (over several months) where a draft version of the XML schema files was on the ITE website. Checked the current version of the XML schema files and volume 2, and the meter-rate and the elements, meter-implemented-plan and meter-implemented-rate are now separate values and not choices.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1198	UC117	Igor Babaryko	Version 3.01 Draft (v4)	WSDL	Version 3.01 Draft (v4)	

Comment: The description of the Video Switch Inventory Request (Volume 1 of the TMDD V3.0 standard) states:

3.3.6.4.1.4 Contents of the Video Switch Inventory Request

The requirements for video switch inventory requests from an external center to an owner center are found in Section 3.3.6.1.1.1, "Contents of Device Information Request", with the device type set to "video switch" and device information type set to "device inventory."

But the TMDD.xsd schema misses the "video switch" item in the list of possible values of the Device Type:

```
<xs:simpleType name="Device-type">
  <xs:annotation>
    <xs:documentation>
      <objectClass>Device</objectClass>
      <valueDomainTerm>cd</valueDomainTerm>
      <units/>
    </xs:documentation>
  </xs:annotation>
  <xs:union>
    <xs:simpleType>
      <xs:restriction base="xs:unsignedInt">
        <xs:minInclusive value="1"/>
        <xs:maxInclusive value="10"/>
      </xs:restriction>
    </xs:simpleType>
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:enumeration value="detector"/>
        <xs:enumeration value="cctv camera"/>
        <xs:enumeration value="dynamic message sign"/>
        <xs:enumeration value="environmental sensor station"/>
        <xs:enumeration value="gate"/>
        <xs:enumeration value="highway advisory radio"/>
        <xs:enumeration value="lane control signal"/>
        <xs:enumeration value="ramp meter"/>
        <xs:enumeration value="signal controller"/>
        <xs:enumeration value="signal section"/>
      </xs:restriction>
    </xs:simpleType>
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:enumeration value="insert-extension-values-here"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:union>
</xs:simpleType>
```

Resolution: Comment Status: Closed Disposition: Accepted

Added video switch as an enumeration as such:

```
<xs:simpleType name="Device-type">
  <xs:annotation>
    <xs:documentation>
      <objectClass>Device</objectClass>
      <valueDomainTerm>cd</valueDomainTerm>
      <units/>
    </xs:documentation>
  </xs:annotation>
  <xs:union>
    <xs:simpleType>
      <xs:restriction base="xs:unsignedInt">
        <xs:minInclusive value="1"/>
        <xs:maxInclusive value="11"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:union>
</xs:simpleType>
```

Comments

```
        </xs:restriction>
    </xs:simpleType>
    <xs:simpleType>
        <xs:restriction base="xs:string">
            <xs:enumeration value="detector"/>
            <xs:enumeration value="cctv camera"/>
            <xs:enumeration value="dynamic message sign"/>
            <xs:enumeration value="environmental sensor station"/>
            <xs:enumeration value="gate"/>
            <xs:enumeration value="highway advisory radio"/>
            <xs:enumeration value="lane control signal"/>
            <xs:enumeration value="ramp meter"/>
            <xs:enumeration value="signal controller"/>
            <xs:enumeration value="signal section"/>
            <xs:enumeration value="video switch"/>
        </xs:restriction>
    </xs:simpleType>
    <xs:simpleType>
        <xs:restriction base="xs:string">
            <xs:enumeration value="insert-extension-values-here"/>
        </xs:restriction>
    </xs:simpleType>
</xs:union>
</xs:simpleType>
```

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1199	UC117	Igor Babaryko	Version 3.01 Draft (v4)		Version 3.01 Draft (v4)	

Comment: the latest TMDD.wSDL file is not valid. It references on number of messages that do not exist in the WSDL file

```
<operation name="dlESSObservationReportUpdate">
    <documentation><objectClass>ESS</objectClass><msgPattern>Pub</msgPattern><requirement>REQ1214</requirement></documentation>
    <input message="tns:MSG_ESSObservationReportUpdate"/>
    <output message="tns:MSG_ConfirmationReceipt"/>
    <fault name="errorReport" message="tns:MSG_ErrorReport"/>
</operation>
```

Resolution: Added to the tmdd.wSDL
Comment Status: Closed
Disposition: Accepted

```
<message name="MSG_ESSObservationReportUpdate">
    <part name="c2cMsgAdmin" element="c2c:c2cMessagePublication"/>
    <part name="message" element="tmdd:eSSObservationReportMsg"/>
</message>
```

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1200	UC117	Igor Babaryko	Version 3.01 Draft (v4)		Version 3.01 Draft (v4)	

Comment: The latest TMDD.wsdl file is not valid. It references on number of messages that do not exist in the WSDL file

```
<operation name="dlHARMessageInventoryUpdate">
  <documentation><objectClass>HAR</objectClass><msgPattern>Pub</msgPattern><requirement>REQ887</requirement></documentation>
  <input message="tns:MSG_HARMessageInventoryUpdate"/>
  <output message="tns:MSG_ConfirmationReceipt"/>
  <fault name="errorReport" message="tns:MSG_ErrorReport"/>
</operation>
```

Resolution:	Comment Status: Closed	Disposition: Accepted
Added:		

```
<message name="MSG_HARMessageInventoryUpdate">
<part name="c2cMsgAdmin" element="c2c:c2cMessagePublication"/>
<part name="message" element="tmdd:hARMessageInventory"/>
</message>
```

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1201	UC118	Raman Patel	Version 3.01 Draft (v4)		Version 3.01 Draft (v4)	

Comment: The title and text reference the TMDD Joint Committee. It should be Steering Committee.

Resolution:	Comment Status: Closed	Disposition: Accepted
Will be corrected.		

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1202	UC119	Patrick Powell	Version 3.01 Draft (v4)		Version 3.01 Draft (v4)	

Comment: Please get rid of the:

```
<soap:operation soapAction="" "" style="document"/>
```

Replace them with:

```
<soap:operation soapAction="dl/VideoSwitchStatusUpdate" style="document"/>
```

Or the appropriate other message. The first form forces the soapAction header to be set to ' ', which is a &*(())(*& pain when trying to parse/determine how to handle SOAP requests.

Resolution:	Comment Status: Closed	Disposition: Accepted
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In Section 7.1.2 of NTCIP 2306, clause f in the Normative section, "The soapAction attribute specifies the soapAction which the external center requester must included within an HTTP header. There is no requirement for a soapAction, only that the attribute be present. However, if no soapAction is specified, the soapAction attribute must by written as a double quote followed by two consecutive single quote characters followed by a double quote (""). The soapAction shall be a URL that indicates the message handler for the endpoint."

This will be corrected in the wsdl.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1203	UC119	Patrick Powell	Version 3.01 Draft (v4)		Version 3.01 Draft (v4)	

Comment: please note that you have WSDL syntax/schema violation:

```
<fault name="errorReport">  
  <soap:body use="literal"/>  
</fault>
```

should be:

```
<fault name="errorReport">  
  <soap:fault name="errorReport" use="literal"/>  
</fault>
```

See the WSDL 1.1 reference document.

Resolution: Comment Status: Closed Disposition: Accepted

This will be corrected.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1204	UC120	Walter Crear	Version 3.01 Draft (v4)		Version 3.01 Draft (v4)	

Comment: The WSDL is missing a number of Message definitions for some publications:

```
MSG_ESS_ObservationUPdate  
MSG_HARMessageInventoryUpdate  
MSG_SectionControlResponseUpdate
```

Resolution: Comment Status: Closed Disposition: Accepted

The following were added to the wsdl:

```
<message name="MSG_ESSObservationReportUpdate">  
  <part name="c2cMsgAdmin" element="c2c:c2cMessagePublication"/>  
  <part name="message" element="tmdd:eSSObservationReportMsg"/>  
</message>
```

```
<message name="MSG_HARMessageInventoryUpdate">  
  <part name="c2cMsgAdmin" element="c2c:c2cMessagePublication"/>  
  <part name="message" element="tmdd:hARMessageInventory"/>  
</message>
```

The following was deleted from the wsdl:

```
<operation name="dlSectionTimingPatternUpdate">  
  <documentation><objectClass>Section</objectClass><msgPattern>Pub</msgPattern><requirement>REQ1343</requirement></documentation>  
  <input message="tns:MSG_SectionControlResponseUpdate"/>  
  <output message="tns:MSG_ConfirmationReceipt"/>  
  <fault name="errorReport" message="tns:MSG_ErrorReport"/>  
</operation>
```

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1205	UC120	Walter Crear	Version 3.01 Draft (v4)		Version 3.01 Draft (v4)	

Comment: The MSG_HARInventory and MSG_HARMessageInventory message definitions reference the gateInventoryMsg, not the appropriate HAR messages.

Resolution: Comment Status: Closed Disposition: Accepted

The lines have been updated to:

```
<message name="MSG_HARInventory">
<part name="message" element="tmdd:hARInventoryMsg"/>
</message>
```

```
<message name="MSG_HARMessageInventory">
<part name="message" element="tmdd:hARMessageInventory"/>
</message>
```

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1206	UC120	Walter Crear	Version 3.01 Draft (v4)		Version 3.01 Draft (v4)	

Comment: I've started looking at the NRTM-RTM-Schema traceability. I see that the NRTM-RTM seem to indicate that the CenterActiveVerificationRequestMsg is defined by a CenterActiveVerificationRequest frame. The NRTM-RTM indicates that there are three elements within this data frame: 1) authentication, 2) organization-requesting, 3) organization-requesting (optional). However the TMDD.xsd indicates that this data frame contains only 2 mandatory elements 1) authentication and 2) organization-requesting. Which is correct?

Resolution: Comment Status: Closed Disposition: Accepted

Update the requirements text, where appropriate so the required request or information content is: the requesting organization information; user name; and password.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1207	UC121	Igor Babaryko	Version 3.01 Draft (v4)		Version 3.01 Draft (v4)	

Comment: The following messages that are not defined correctly in the TMDD.WSDL file.

- MSG_SectionControlScheduleResponseUpdate
- MSG_SectionControlResponseUpdate

Resolution: Comment Status: Closed Disposition: Accepted

Deleted the following operation:

```
<operation name="dlSectionTimingPatternUpdate">
<documentation><objectClass>Section</objectClass><msgPattern>Pub</msgPattern><requirement>REQ1343</requirement><
/documentation>
<input message="tns:MSG_SectionControlResponseUpdate"/>
<output message="tns:MSG_ConfirmationReceipt"/>
<fault name="errorReport" message="tns:MSG_ErrorReport"/>
</operation>
```

Corrected the following operation:

```
<operation name="dlSectionControlScheduleUpdate">
<documentation><objectClass>Section</objectClass><msgPattern>Pub</msgPattern><requirement>REQ1343</requirement><
/documentation>
<input message="tns:MSG_SectionControlScheduleUpdate"/>
<output message="tns:MSG_ConfirmationReceipt"/>
<fault name="errorReport" message="tns:MSG_ErrorReport"/>
</operation>
```

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1208	UC121	Igor Babaryko	Version 3.01 Draft (v4)		Version 3.01 Draft (v4)	

Comment: The dlSectionTimingPatternRequest operation is defined in the tmddOCSoapHttpServiceBinding binding section:

```
<binding name="tmddOCSoapHttpServiceBinding" type="tns:tmddOCSoapHttpServicePortType">
.....
  <operation name="dlSectionTimingPatternRequest">
    <soap:operation soapAction="" style="document"/>
    <input>
      <soap:body use="literal"/>
    </input>
    <output>
      <soap:body use="literal"/>
    </output>
    <fault name="errorReport">
      <soap:body use="literal"/>
    </fault>
  </operation>
.....
</binding>
```

but tmddOCSoapHttpServicePortType port type section does not contain a mapping of the dlSectionTimingPatternRequest with the particular messages from TMDD.xsd.

Resolution:	Comment Status: Closed	Disposition: Accepted
-------------	------------------------	-----------------------

The operation, dlSectionTimingPatternRequest, has been deleted from the tmdd.wsdl. This operation is left over from a draft requirement that was deleted in TMDD v3.0.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1209	UC121	Igor Babaryko	Version 3.01 Draft (v4)		Version 3.01 Draft (v4)	

Comment: There is an issue that does not allow to generate a proxy file based on the existing schemas using Microsoft tools.

The svtutil.exe tools that Microsoft recommends to use for generating a proxy file throws the following exception:

Error: There was a validation error on a schema generated during export:

Source:

Line: 1623 Column: 5

Validation Error: The MaxInclusive constraining facet is invalid - The string '+10000' is not a valid UInt16 value.

This error occurs because the LRMS-Adopted-02-00-00.xsd schema contains a "+" in front of the following maxInclusive value:

```
<xs:simpleType name="PublicGridGridStep">
  <xs:restriction base="xs:unsignedShort">
    <xs:minInclusive value="1"/>
    <xs:maxInclusive value="+10000"/>
  </xs:restriction>
</xs:simpleType>
```

but the Microsoft tool does not throws any errors against "+" if the item's type is defined as "xs:short"

```
<xs:simpleType name="PublicGridNorthSouthDelta">
  <xs:restriction base="xs:short">
    <xs:minInclusive value="-10000"/>
    <xs:maxInclusive value="+10000"/>
  </xs:restriction>
</xs:simpleType>
```

Here is the definition of both short and unsignedShort data types:

xsd:short - An integer between -32768 and 32767 inclusive

xsd:unsignedShort - An integer between 0 and 65535

It looks that the Microsoft tool threads "+" as invalid value because, by definition, the unsignedShort data type cannot have negative values.

I could not find an explicit description in the W3C standard if the "+" is allowed value for unsignedShort data type or not.

If you do not have special reasons to keep "+" (that actually is not necessary), maybe ITE wants to remove "+" from the definition of the PublicGridGridStep item, so the companies who develop Microsoft based systems should not fix this issue manually.

Resolution: Comment Status: Closed Disposition: Accepted

It's either xs:unsignedShort and xs:maxInclusive value="10000"

or

xs:short and xs:maxInclusive="+10000"

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1210	UC121	Igor Babaryko	Version 3.01 Draft (v4)		Version 3.01 Draft (v4)	

Comment: In the TMDD V3.01 the following items are defined as:

```
<xs:simpleType name="DmsBeaconType">
  <xs:restriction base="xs:unsignedByte">
    <xs:minInclusive value="1"/>
    <xs:maxInclusive value="13"/>
  </xs:restriction>
</xs:simpleType>

<xs:simpleType name="DmsMessageMemoryType">
  <xs:restriction base="xs:unsignedByte">
    <xs:minInclusive value="1"/>
    <xs:maxInclusive value="7"/>
  </xs:restriction>
</xs:simpleType>

<xs:simpleType name="DmsMessageStatus">
  <xs:restriction base="xs:unsignedByte">
    <xs:minInclusive value="1"/>
    <xs:maxInclusive value="8"/>
  </xs:restriction>
</xs:simpleType>
```

These definitions do not look perfect because these elements do not contain such variable data as a speed, size, count and etc. These min/max values are referencing on the particular enumeration values that are defined by the NTCIP 1203 standard. For example, the DmsMessageStatus has the following description.

5.6.8.9 Message Status Parameter
dmsMessageStatus OBJECT-TYPE
SYNTAX INTEGER {
notUsed (1),
modifying (2),
validating (3),
valid (4),
error (5),
modifyReq (6),
validateReq (7),
notUsedReq (8) }
ACCESS read-write
STATUS mandatory
DESCRIPTION

"<Definition> Indicates the current state of the message. This state-machine allows for defining a message, validating a message, and deleting a message.

See Section 4.3.4 for additional details regarding the state-machine.

In my opinion above mentioned elements should be redefined as:

```
<xs:simpleType name="DmsBeaconType">
  <xs:union>
    <xs:simpleType>
      <xs:restriction base="xs:unsignedByte">
        <xs:minInclusive value="1"/>
        <xs:maxInclusive value="13"/>
      </xs:restriction>
    </xs:simpleType>
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:enumeration value="other"/>
        <xs:enumeration value="none"/>
        <xs:enumeration value="oneBeacon"/>
        <xs:enumeration value="twoBeaconSyncFlash"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:union>
</xs:simpleType>
```

Comments

```

<xs:enumeration value="twoBeaconsOppFlash"/>
<xs:enumeration value="fourBeaconSyncFlash"/>
<xs:enumeration value="fourBeaconAltRowFlash"/>
<xs:enumeration value="fourBeaconAltColumnFlash"/>
<xs:enumeration value="fourBeaconAltDiagonalFlash"/>
<xs:enumeration value="fourBeaconNoSyncFlash"/>
<xs:enumeration value="oneBeaconStrobe"/>
<xs:enumeration value="twoBeaconStrobe"/>
<xs:enumeration value="fourBeaconStrobe"/>
</xs:restriction>
</xs:simpleType>
<xs:simpleType>
  <xs:restriction base="xs:string">
    <xs:enumeration value="insert-extension-values-here"/>
  </xs:restriction>
</xs:simpleType>
</xs:union>
</xs:simpleType>

```

The definitions above do not allow to interpret the min/max numbers differently and compliant with other TMDD's <xs:simpleType> that contains enumerations. The NTCIP-References.xsd file also contains other elements with min/max restrictions, but without explicitly defined enumerations.

Resolution: Comment Status: Closed Disposition: Accepted

The enumerations will be added to the NTCIP-References.xsd as appropriate.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1211	UC121	Igor Babaryko	Version 3.01 Draft (v4)		Version 3.01 Draft (v4)	

Comment: The DmsSupportedMultiTags element in the TMDD V3.1 was defined as a "xs:string", but it does not contain a size restriction.

```

<xs:simpleType name="DmsSupportedMultiTags">
  <xs:restriction base="xs:string"/>
</xs:simpleType>

```

According to the NTCIP 1203 standard, this is a bitmap element that should contain exactly four bytes and does not allow an user, for example, to send a MULTI tags as a comma-separated string :

```

<xs:simpleType name="DmsSupportedMultiTags">
  <xs:restriction base="xs:string">
    <xs:length value="4"/>
  </xs:restriction>
</xs:simpleType>

```

Resolution: Comment Status: Closed Disposition: Accepted

Suggested change made.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1212	UC122	Glenn Massarano	Version 3.01 Draft (v4)		Version 3.01 Draft (v4)	

Comment: The specification currently requires volume and occupancy data in the DetectorDataDetail message. However, some devices currently in use provide only one or sometimes neither (such as speed only devices). However there is no way to show this or to indicate that the value is invalid.

Possible solutions: one solution is to make vehicle-count and vehicle-occupancy optional values. Another solution is to allow for a validity flag that indicates which fields are valid.

Resolution: Comment Status: Closed Disposition: Accepted

Agreed. Made vehicle count and occupancy data optional in TMDD v3.01.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1213	UC122	Glenn Massarano	Version 3.01 Draft (v4)		Version 3.01 Draft (v4)	

Comment: Problem: Currently, detector data and status are separate message. While a client can acquire data, it is unclear whether the data is usable based on status. That information must be gleaned from a separate call.

Possible solutions: one solution is to continue with this pattern. A second solution is to combine the data into the status message, similar to the way that link status and data is in a single message.

Resolution: Comment Status: Closed Disposition: Future
No change at this time. While I appreciate the advantages of combining the messages, the message will become pretty large and unwieldy and there may be advantages to keeping them separate.
Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1214	UC122	Glenn Massarano	Version 3.01 Draft (v4)		Version 3.01 Draft (v4)	

Comment: Problem: in the distributed C2C.xsd, the C2cMessagePublication type has a subscriptionCount which is optional. in the NTCIP 2306, there is conflicting information about whether it is optional or required. NTCIP 2306 Section 7.2.1.2, f(ii), specifies this element is mandatory. Section 7.2.1.3 provides XSD which specifies that this element is optional. However, this latter section appears erroneous for multiple reasons. The first reason is that a sequence number seems to be required to ensure that missed updates are detected. The second reason is that the subscriptionCount type specified in the XSD fragment is SubscriptionFrequency. While the base type of SubscriptionFrequency is consistency with the text found in &.2.1.2 f(ii), there is a separate SubscriptionCount type which seems to be what was intended.

Possible solutions: one solution is to leave it as is and refer the problem to the NTCIP C2C committee. A related solution is allow individual agencies to determine how they want to handle this. A third solution is to modify this to correct the apparent error in the XSD.

Resolution: Comment Status: Closed Disposition: Accepted
The SubscriptionCount is just a simple counter that increments by one when a publisher sends out a message.

So, if a subscriber sees the message count go something like: 1, 2, 5 - instead of 1, 2, 3, 4, 5 - then the subscriber can determine that messages 3 and 4 were missed and can request that the publisher send a "fresh copy" of the data so that the subscriber can stay in sync. So, if I subscribe to incident updates, then I would get all the current incidents (1, 2, 3, 4, 5), and then after I would be in sync again. We didn't create a way to request just 4 & 5.

It seems like the element in the XSD was incorrectly tagged as optional instead of mandatory.

Version Comment Addressed: TMDD v3.01

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1215	UC122	Glenn Massarano	Version 3.01 Draft (v4)		Version 3.01 Draft (v4)	

Comment: Problem: in the DMSStatus type, the current-message element is required. Therefore, something needs to be sent, even if the message is blank.

Possible solutions: if this is left as is, an owning center must send something for the current-message. It cannot be null or nil. Another solution would be to make this element optional.

Resolution: Comment Status: Closed Disposition: Rejected
The way NTCIP 1203 works, even a command to blank the sign will have a message value - so the value will not be zero.

Recall that null values are allowed in TMDD v3.0.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1216	UC122	Glenn Massarano	Version 3.01 Draft (v4)		Version 3.01 Draft (v4)	

Comment: Problem: in the DeviceInventoryHeader type, the device-location is required. If the location is not known, there is no way to send this information.

Possible solutions: one solution is to leave the specification as it is and assume that some arbitrary location, such as (0,0) indicates that the location is "unknown". A second solution is to make this element optional.

Resolution: Comment Status: Closed Disposition: Rejected
TMDD v3.0 allows null values. If the external center / organization is unable to determine the device-location, I'm not sure what use is the device inventory information.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1217	UC122	Glenn Massarano	Version 3.01 Draft (v4)		Version 3.01 Draft (v4)	

Comment: Problem: the trafficNetworkInformationRequestMsg is different from the deviceInformationRequestMsg. In the latter, the client specifies for which organization the devices are being requested. However, the former does not have a similar element. So it is not possible, for example, to request all links for a specific organization.

Possible solutions: one solution is to leave the specification as it is and utilize an existing field, such as network-id. A second solution would be to add organization-information to the request.

Resolution: Comment Status: Closed Disposition: Rejected
The intent of trafficNetworkInformationRequestMsg was this is a message that would have to be sent to each organization to get its traffic network information - there was no intent to be able to go to a 'central' server and obtain the traffic network for multiple organizations.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1218	UC122	Glenn Massarano	Version 3.01 Draft (v4)		Version 3.01 Draft (v4)	

Comment: Problem: in the draft NTCIP Reference XSD, many of the items have units. These units should be explicit.

Possible solutions: include them in comments, annotations, or notes.

Resolution: Comment Status: Closed Disposition: Accepted
NTCIP-References.xsd was updated in TMDD v3.01 with the correct data types, ranges, enumerations, and with the version of the NTCIP standard it references.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1219	UC122	Glenn Massarano	Version 3.01 Draft (v4)		Version 3.01 Draft (v4)	

Comment: Problem: most, if not all responses to information requests require at least one element. In some cases, there may be no items to return, either because the type doesn't exist in the system or none fulfills the filter requests.

Possible solutions: one solution is to leave the specification as it is and throw an exception. This is probably extreme, but acceptable. Another solution is to make the minOccurs for elements such as cctv-inventory-item in cCTVInventoryMsg to 0.

Resolution: Comment Status: Closed Disposition: Accepted
Add an enumeration in the error-report-code, with the error text, "no valid data available".

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1220	UC123	Igor Babaryko	Version 3.01 Draft (v4)		Version 3.01 Draft (v4)	

Comment: The standard TMDD's <xs:simpleType> elements contains enumeration and integer representation that can be mapped to the proper enumerated item:

```
<xs:simpleType name="SubscriptionActionItem">
  <xs:union>
    <xs:simpleType>
      <xs:restriction base="xs:unsignedInt">
        <xs:minInclusive value="0"/>
        <xs:maxInclusive value="4"/>
      </xs:restriction>
    </xs:simpleType>
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:enumeration value="reserved"/>
        <xs:enumeration value="newSubscription"/>
        <xs:enumeration value="replaceSubscription"/>
        <xs:enumeration value="cancelSubscription"/>
        <xs:enumeration value="cancelAllPriorSubscriptions"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:union>
</xs:simpleType>
```

The tracing in our system shows that some of the <xs:simpleType> elements are defined incorrectly, for example, the first six enumerated items of the Transportation-network-information-type element can be mapped properly, but not the "network information":

```
<xs:simpleType name="Transportation-network-information-type">
  <xs:union>
    <xs:simpleType>
      <xs:restriction base="xs:unsignedInt">
        <xs:minInclusive value="1"/>
        <xs:maxInclusive value="6"/>
      </xs:restriction>
    </xs:simpleType>
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:enumeration value="node inventory"/>
        <xs:enumeration value="node status"/>
        <xs:enumeration value="link inventory"/>
        <xs:enumeration value="link status"/>
        <xs:enumeration value="route inventory"/>
        <xs:enumeration value="route status"/>
        <xs:enumeration value="network inventory"/>
      </xs:restriction>
    </xs:simpleType>
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:enumeration value="insert-extension-values-here"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:union>
</xs:simpleType>
```

Here is the entire list of <xs:simpleType> elements that are defined incorrectly. The biggest issue is with the TMDD's EventType. Almost all of the <xs:simpleType> related with the EventType object are defined incorrectly.

SimpleType: <http://www.tmdd.org/3/messages:Error-report-code>
Min. value: 1
Max. value: 6
Count: 7

Comments

SimpleType: <http://www.tmdo.org/3/messages:Link-type>
Min. value: 1
Max. value: 20
Count: 18

SimpleType: <http://www.tmdo.org/3/messages:Transportation-network-information-type>
Min. value: 1
Max. value: 6
Count: 7

The following ones are related with the EventType:

SimpleType: <http://www.ITIS-Adopted-03-00-02:AccidentsAndIncidents>
Min. value: 512
Max. value: 767
Count: 52

SimpleType: <http://www.ITIS-Adopted-03-00-02:AdviceInstructionsMandatory>
Min. value: 7424
Max. value: 7679
Count: 26

SimpleType: <http://www.ITIS-Adopted-03-00-02:AdviceInstructionsRecommendations>
Min. value: 7168
Max. value: 7423
Count: 28

SimpleType: <http://www.ITIS-Adopted-03-00-02:AlternateRoute>
Min. value: 8448
Max. value: 8703
Count: 17

SimpleType: <http://www.ITIS-Adopted-03-00-02:Closures>
Min. value: 768
Max. value: 1023
Count: 18

SimpleType: <http://www.ITIS-Adopted-03-00-02:DelayStatusCancellation>
Min. value: 1536
Max. value: 1791
Count: 36

SimpleType: <http://www.ITIS-Adopted-03-00-02:DeviceStatus>
Min. value: 2304
Max. value: 2559
Count: 41

SimpleType: <http://www.ITIS-Adopted-03-00-02:Disasters>
Min. value: 3072
Max. value: 3327
Count: 32

SimpleType: <http://www.ITIS-Adopted-03-00-02:Disturbances>
Min. value: 3328
Max. value: 3583
Count: 37

SimpleType: <http://www.ITIS-Adopted-03-00-02:IncidentResponseEquipment>
Min. value: 9984
Max. value: 10239
Count: 72

SimpleType: <http://www.ITIS-Adopted-03-00-02:LaneRoadway>
Min. value: 8192
Max. value: 8447

Comments

Count: 54

SimpleType: <http://www.ITIS-Adopted-03-00-02:MobileSituation>
Min. value: 2048
Max. value: 2303
Count: 22

SimpleType: <http://www.ITIS-Adopted-03-00-02:Obstruction>
Min. value: 1280
Max. value: 1535
Count: 40

SimpleType: <http://www.ITIS-Adopted-03-00-02:ParkingInformation>
Min. value: 4096
Max. value: 4351
Count: 23

SimpleType: <http://www.ITIS-Adopted-03-00-02:PavementConditions>
Min. value: 5888
Max. value: 6143
Count: 47

SimpleType: <http://www.ITIS-Adopted-03-00-02:Precipitation>
Min. value: 4864
Max. value: 5119
Count: 26

SimpleType: <http://www.ITIS-Adopted-03-00-02:ResponderGroupAffected>
Min. value: 9728
Max. value: 9983
Count: 14

SimpleType: <http://www.ITIS-Adopted-03-00-02:RestrictionClass>
Min. value: 2560
Max. value: 2815
Count: 40

SimpleType: <http://www.ITIS-Adopted-03-00-02:Roadwork>
Min. value: 1024
Max. value: 1279
Count: 43

SimpleType: <http://www.ITIS-Adopted-03-00-02:SpecialEvents>
Min. value: 3840
Max. value: 4095
Count: 23

SimpleType: <http://www.ITIS-Adopted-03-00-02:SportingEvents>
Min. value: 3584
Max. value: 3839
Count: 25

SimpleType: <http://www.ITIS-Adopted-03-00-02:SuggestionAdvice>
Min. value: 6656
Max. value: 6911
Count: 21

SimpleType: <http://www.ITIS-Adopted-03-00-02:SystemInformation>
Min. value: 4352
Max. value: 4607
Count: 10

SimpleType: <http://www.ITIS-Adopted-03-00-02:Temperature>
Min. value: 5632
Max. value: 5887

Comments

Count: 23

SimpleType: <http://www.ITIS-Adopted-03-00-02:TrafficConditions>
Min. value: 256
Max. value: 511
Count: 18

SimpleType: <http://www.ITIS-Adopted-03-00-02:TransitMode>
Min. value: 8960
Max. value: 9215
Count: 24

SimpleType: <http://www.ITIS-Adopted-03-00-02:TransitOperations>
Min. value: 10752
Max. value: 11007
Count: 53

SimpleType: <http://www.ITIS-Adopted-03-00-02:TravelerGroupAffected>
Min. value: 9472
Max. value: 9727
Count: 15

SimpleType: <http://www.ITIS-Adopted-03-00-02:UnusualDriving>
Min. value: 1792
Max. value: 2047
Count: 8

SimpleType: <http://www.ITIS-Adopted-03-00-02:VehicleGroupAffected>
Min. value: 9216
Max. value: 9471
Count: 35

SimpleType: <http://www.ITIS-Adopted-03-00-02:VisibilityAndAirQuality>
Min. value: 5376
Max. value: 5631
Count: 34

SimpleType: <http://www.ITIS-Adopted-03-00-02:WarningAdvice>
Min. value: 6912
Max. value: 7167
Count: 32

SimpleType: <http://www.ITIS-Adopted-03-00-02:WeatherConditions>
Min. value: 4608
Max. value: 4863
Count: 28

SimpleType: <http://www.ITIS-Adopted-03-00-02:Winds>
Min. value: 5120
Max. value: 5375
Count: 15

SimpleType: <http://www.ITIS-Adopted-03-00-02:WinterDrivingIndex>
Min. value: 6400
Max. value: 6655
Count: 6

SimpleType: <http://www.ITIS-Adopted-03-00-02:WinterDrivingRestrictions>
Min. value: 6144
Max. value: 6399
Count: 13

Resolution:

Comment Status: Closed

Disposition: Accepted

Corrected the "count" for transportation-network-information-type, error-report-code, and link-type.

Friday, March 13, 2020

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Comments

The remaining ones are in ITS-Adopted-03-00-02.xsd file, the enumeration values are fixed by another standard, so those changes were not made.

Version Comment Addressed: TMDD v3.01 Dra

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1221	UC124	Igor Babaryko	Version 3.01 Draft (v4)		Version 3.01 Draft (v4)	

Comment: The ITE agreed to update the soapAction in the WSDL file as it was proposed in the Comment Id: 1202.

Please note, if soapActions do not provided for operation contracts, the Microsoft generates the soapActions automatically using the following rule:

“Use the Action property to control the action of the method's input message. Because uses this action to dispatch an incoming message to the appropriate method, messages used within a contract operation must have unique actions. The default action value is a combination of the contract namespace (the default value is "http://tempuri.org/"), the contract name (interface name or the class name, if no explicit service interface is used), the operation name, and an additional string ("Response") if the message is a correlated response.”

The entire article can be found here: <http://msdn.microsoft.com/en-us/library/system.servicemodel.operationcontractattribute.action.aspx>

Accordingly, for example, the soapAction of dIDMSInventoryRequest based on the TMDD.WSDL file will be generated as:

<http://www.tmdd.org/3/dialogs/tmddOCSoapHttpServicePortType/dIDMSInventoryRequest>

This combination (Namespace + Contract Name + Operation Name) allows uniquely identify the operations that are exposed by a service.

So, the dIDMSInventoryRequest operation (tmddOCSoapHttpServicePortType) will be defined as:

```
<operation name="dIDMSInventoryRequest">
  <soap:operation
soapAction="http://www.tmdd.org/3/dialogs/tmddOCSoapHttpServicePortType/dIDMSInventoryRequest"
style="document"/>
  <input>
    <soap:body use="literal"/>
  </input>
  .....
</operation>
```

and publication messages (tmddECSOapHttpServicePortType) will be defined as:

```
<operation name="dICCTVInventoryUpdate">
  <soap:operation
soapAction="http://www.tmdd.org/3/dialogs/tmddECSOapHttpServicePortType/dICCTVInventoryUpdate"
style="document"/>
  <input>
    <soap:body use="literal"/>
  </input>
  .....
</operation>
```

My recommendation is to use the same approach for TMDD. In this case the TMDD also will be consistent with the NTCIP 2306 that requires: “The soapAction shall be a URL that indicates the message handler for the endpoint.”

Resolution: Comment Status: Closed Disposition: Informative

What the soapAction points to is a detail that is for each implementation. The 2306 provides an example (see 7.1.1 as an example) and the little blurb is in an informative section.

Version Comment Addressed: TMDD v3.01 Dra

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1222	UC124	Igor Babaryko	Version 3.01 Draft (v4)		Version 3.01 Draft (v4)	

Comment: The namespaces in the WSDL file of the "TMDD V3.0 v6.0 UCD" were defined as:

```
targetNamespace="http://tmdd-center-services"  
xmlns:tns="http://tmdd-center-services"  
xmlns:tmdd="http://www.ite.org/tmdd"
```

In the "TMDD V3.0 v9.0 Balloted Standard" and "TMDD V3.1 Standard - Draft v4" they are the same (but structure of messages was changed):

```
targetNamespace="http://www.tmdd.org/3/dialogs"  
xmlns:tns="http://www.tmdd.org/3/dialogs"  
xmlns:tmdd="http://www.tmdd.org/3/messages"
```

Is it possible to have some consistence here, so the namespace includes a version of the TMDD? For example:

```
targetNamespace="http://www.tmdd.org/3.1/dialogs"  
targetNamespace="http://www.tmdd.org/3.2/dialogs"  
targetNamespace="http://www.tmdd.org/4/dialogs"
```

This approach will not bring issues when the same service has to work with external C2C centers that support different versions of TMDD standard.

Please note that this recommendation is close related with my previous comment about using a Namespace inside a soapAction.

Resolution: Comment Status: Closed Disposition: Accepted

The namespaces in the WSDL and the tmdd.xsd file has been changed to:

<http://www.tmdd.org/301/xxx> as appropriate.

Version Comment Addressed: TMDD v3.01 Dra

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1223	UC124	Igor Babaryko	Version 3.01 Draft (v4)		Version 3.01 Draft (v4)	

Comment: Inside the NTCIP-References.xsd the following elements (that are used in the cCTVControlRequestMsg) are defined as "xs:unsignedShort":

```
<xs:simpleType name="PositionPan">  
<xs:simpleType name="PositionTilt">  
<xs:simpleType name="PositionZoomLens">  
<xs:simpleType name="PositionIrisLens">  
<xs:simpleType name="PositionFocusLens">
```

The xs:unsignedShort contains two bytes of data. According to the NTCIP 1205 v1.08 that TMDD standard references on, these elements should be declared as string that contains four bytes. In this case the schemas will allow to control a delta, absolute and continuous modes of movement. For example:

```
<xs:simpleType name="PositionPan">  
  <xs:restriction base="xs:string">  
    <xs:length value="4"/>  
  </xs:restriction>  
</xs:simpleType>
```

Resolution: Comment Status: Closed Disposition: Accepted

The proposed changes have been made.

Version Comment Addressed: TMDD v3.01 Dra

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1224	UC125	Raman Patel	Version 3.01 Draft (v4)	Title P	Version 3.01 Draft (v4)	

Comment: Title page: Keep " Data Dictionary" together in one line

Resolution: Comment Status: Closed Disposition: Accepted
Change made.
Version Comment Addressed: TMDD v3.01 Dra

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1225	UC125	Raman Patel	Version 3.01 Draft (v4)	Volum	Version 3.01 Draft (v4)	Figure 1

Comment: Add Data Frames, as part of DC

Resolution: Comment Status: Closed Disposition: Accepted
Change made.
Version Comment Addressed: TMDD v3.01 Dra

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1226	UC125	Raman Patel	Version 3.01 Draft (v4)	Volum	Version 3.01 Draft (v4)	Section 1.2

Comment: Sec 1.2, remove "set of", not needed

Resolution: Comment Status: Closed Disposition: No Longer Applica
Not Found.
Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1227	UC125	Raman Patel	Version 3.01 Draft (v4)	Volum	Version 3.01 Draft (v4)	Figure 2

Comment: Figure 2, drop the term, "specific Application Profiles"

Resolution: Comment Status: Closed Disposition: Accepted
Updated XML Specific Application Profile to XML Application Profile.
Version Comment Addressed: TMDD v3.01 Dra

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1228	UC125	Raman Patel	Version 3.01 Draft (v4)	Volum	Version 3.01 Draft (v4)	Section 1.3

Comment: Sec 1.3, "follows based on a..."

Resolution: Comment Status: Closed Disposition: No Longer Applica
Not found.
Version Comment Addressed: TMDD v3.01 Dra

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1229	UC125	Raman Patel	Version 3.01 Draft (v4)	Volum	Version 3.01 Draft (v4)	Section 2.2.1 - Figure

Comment: Sec 2.2.1, Figure 3 should be Figure 5?

Resolution: Comment Status: Closed Disposition: Accepted
The figure numbering and reference has been updated.
Version Comment Addressed: TMDD V3.01 Dra

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1230	UC125	Raman Patel	Version 3.01 Draft (v4)	Volum	Version 3.01 Draft (v4)	Section 2.3 Figure

Comment: Sec 2.3 Fig 3 should be Fig 4, text is not matching

Resolution: Comment Status: Closed Disposition: Accepted
The figure numbering and reference has been updated.
Version Comment Addressed: TMDD v3.01 Dra

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1231	UC125	Raman Patel	Version 3.01 Draft (v4)	Volum	Version 3.01 Draft (v4)	Section 2.3.2

Comment: Sec 2.3.2 spacing, align text below 2.3.2

Resolution: Comment Status: Closed Disposition: No Longer Applicable
could not find. I think this is an issue related to the document being in Word 2003 format and the commenter was using a later version of Microsoft Word.
Version Comment Addressed: TMDD v3.01 Dra

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1232	UC125	Raman Patel	Version 3.01 Draft (v4)	Volum	Version 3.01 Draft (v4)	Title page

Comment: Volume II title page, remove box around Volume II to match with Volume I style.

Resolution: Comment Status: Closed Disposition: Accepted
Change made.
Version Comment Addressed: TMDD v3.01 Dra

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1233	UC126	Walter Crear	Version 3.01 Draft (v4)		Version 3.01 Draft (v4)	

Comment: Fundamentally, it looks like the tracing to deviceControlStatusRequestMsg is/was messed up. Here are the errors I currently show and although it's multiple needs involved, they all deal with the same dialog and message. Also for each need listed, the dialog seems to be traced through two separate requirements. Perhaps this can all be fixed by a change in the requirements tag in the WSDL.

For need: 2.3.6.2.5(29) -- there does not appear to be a deviceControlStatusRequestMsg element specified in the NRTM related to dialog dIDeviceControlStatusRequest(EC)

Resolution: Comment Status: Closed Disposition: No Longer Applicable
This was corrected in TMDD v3.01 Draft 5.
Version Comment Addressed: TMDD v3.01 Dra

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1234	UC127	Igor Babaryko	TMDD v3.01 Draft (v5)		TMDD v3.01 Draft (v5)	

Comment: I have one more comment regarding the TMDD v3.01. It looks that dMSStatusMsg misses a status of a beacon.

When an external center requests a DMS Inventory, it receives type of the beacons that are supported by DMS devices. When one center sends a dMSControlRequestMsg to another center, it can specify if a beacon shall be enabled or disabled, but the dMSStatusMsg does not contains a status of a beacon, so there is no way for an external center to know exactly if a beacon currently on or off.

In order to resolve this issue a "message-beacon" element can be added to the dMSStatusMsg, so the schema would look as:

```
<xs:complexType name="DMSStatus">
  <xs:annotation>
    <xs:documentation>
      <objectClass>DMS</objectClass>
    </xs:documentation>
  </xs:annotation>
  <xs:sequence>
    <xs:element name="device-status-header" type="DeviceStatusHeader">
      <xs:annotation>
        <xs:documentation>
          <requirement>REQ34</requirement>
        </xs:documentation>
      </xs:annotation>
    </xs:element>
    <xs:element name="current-message" type="ntcip:DmsMessageMultiString">
      <xs:annotation>
        <xs:documentation>
          <requirement>REQ34</requirement>
        </xs:documentation>
      </xs:annotation>
    </xs:element>
    <xs:element name="message-number" type="ntcip:DmsMsgTableSource" minOccurs="0">
      <xs:annotation>
        <xs:documentation>
          <requirement>REQ37</requirement>
        </xs:documentation>
      </xs:annotation>
    </xs:element>
    <xs:element name="message-time-remaining" type="ntcip:DmsMessageTimeRemaining"
minOccurs="0">
      <xs:annotation>
        <xs:documentation>
          <requirement>REQ39</requirement>
        </xs:documentation>
      </xs:annotation>
    </xs:element>
    <xs:element name="message-source-mode" type="ntcip:DmsMsgSourceMode"
minOccurs="0">
      <xs:annotation>
        <xs:documentation>
          <requirement>REQ38</requirement>
        </xs:documentation>
      </xs:annotation>
    </xs:element>
    <xs:element name="message-beacon" type="ntcip:DmsMessageBeacon" minOccurs="0"/>
    <xs:any namespace="##other" processContents="lax" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>
```

Resolution: Comment Status: Closed Disposition: Accepted

Added message-beacon to DMS Status message.

Comments

Version Comment Addressed: TMDD v3.01 Dra

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1235	UC128	Raman Patel	TMDD v3.01 Draft (v5)	Volum	TMDD v3.01 Draft (v5)	Figure 4?

Comment: Volume I page 14 Figure 4 should be changed to 5 right above it OC EC

Resolution: Comment Status: Closed Disposition: Accepted
Correction made.

Version Comment Addressed: TMDD v3.01 Dra

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1236	UC128	Raman Patel	TMDD v3.01 Draft (v5)	Volum	TMDD v3.01 Draft (v5)	Title Page

Comment: title page remove the box around Design Content

Resolution: Comment Status: Closed Disposition: Accepted
Change made.

Version Comment Addressed: TMDD v3.01 Dra

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1237	UC129	Walter Crear	Version 3.01 Draft (v4)	Volum	Version 3.01 Draft (v4)	

Comment: I ran across this issue before, but I'm not sure it made it into any of our previous comments. The Issue is that the XML representation for the Error-Report-Code data element is wrong. It doesn't match the ASN.1 representation because its maxInclusive value is set to 6 instead of 7 (see highlighted text below). As a result the seventh enumeration "authentication not recognized" violates the maxInclusive rule. I believe this leads to the comment after the enumerations which is an error but blends in like any other comment.

This shows up in both the TMDD.xsd file and the Volume II document.

Perhaps the error codes are presumed to be self explanatory, but as I was putting together test cases for the various error codes I felt like there might be some grey areas in terms the conditions under which each of the codes is used. This would also fit that description. What was the issue that prompted adding this code?

3.4.3.1 Error-report-code

3.4.3.1.1 DEFINITION

Code representing type of error in processing of a TMDD message.

3.4.3.1.2 ASN.1 REPRESENTATION

```
error-report-code ITS-DATA-ELEMENT ::= {
  DESCRIPTIVE-NAME "ConnectionManagement.Error-report-code:cd"
  ASN-NAME "Error-report-code"
  ASN-OBJECT-IDENTIFIER { tmddDataElements 8 }
  DEFINITION "Code representing type of error in processing of a TMDD message."
  DESCRIPTIVE-NAME-CONTEXT {"Manage Traffic"}
  DATA-CONCEPT-TYPE data-element
  STANDARD "TMDD"
  DATA-TYPE "
Error-report-code ::= ENUMERATED {
  unknown-processing-error (1),
  center-does-not-support-this-type-message (2),
  missing-information-prevents-processing-message (3),
  message-is-not-well-formed-or-cannot-be-parsed (4),
  out-of-range-values (5),
  permission-not-granted-for-request (6),
  authentication-not-recognized (7),
  ...
}
"
FORMAT "ASN.1 encoding"
UNIT-OF-MEASURE ""
VALID-VALUE-RULE "see the ASN.1 DATA-TYPE"
}
```

3.4.3.1.3 XML REPRESENTATION

```
<xs:simpleType name="Error-report-code">
  <xs:union>
    <xs:simpleType>
      <xs:restriction base="xs:unsignedInt">
        <xs:minInclusive value="1"/>
        <xs:maxInclusive value="6"/>
      </xs:restriction>
    </xs:simpleType>
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:enumeration value="unknown processing error"/>
        <xs:enumeration value="center does not support this type message"/>
        <xs:enumeration value="missing information prevents processing
message"/>
        <xs:enumeration value="message is not well formed or cannot be parsed"/>
        <xs:enumeration value="out of range values"/>
        <xs:enumeration value="permission not granted for request"/>
        <xs:enumeration value="authentication not recognized"/>
        <!-- not well formed for XML and cannot be parsed for ASN -->
      </xs:restriction>
    </xs:simpleType>
  </xs:union>
</xs:simpleType>
```

Comments

```
</xs:simpleType>
<xs:simpleType>
  <xs:restriction base="xs:string">
    <xs:enumeration value="insert-extension-values-here"/>
  </xs:restriction>
</xs:simpleType>
</xs:union>
</xs:simpleType>
```

Resolution: Comment Status: Closed Disposition: Rejected
An 8th enumeration was added in Version 3.01, Draft 5. The XML file has been updated. We believe that the requirements document provides more clarity on the intent of each error code, though I would concede that grey areas may still exist.

Version Comment Addressed: TMDD v3.01 Dra

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1238	UC130	Raman Patel	TMDD v3.01 Draft (v5)	Volum	TMDD v3.01 Draft (v5)	Section 3.2

Comment: I request that you change the title of the section as mandatory and Optional Requirements

Requirements are not Data and the content below is about M or O requirements as classification. so it makes sense. I may have missed this on my list, but I knew about this a long time ago.

Resolution: Comment Status: Closed Disposition: Accepted
Changed heading from Mandatory and Optional Data to Mandatory and Optional Requirements.

Version Comment Addressed: TMDD v3.01 Dra

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1239	UC131	Steve Sill	TMDD v3.00		TMDD v3.00	

Comment: Inputs to TMDD Vol 1.

1. page 13, para 2.3.4 Need to Share Event Information

Add a new subparagraph to state the following need:

2.3.4.12 Need for Hazardous Materials Information

For an event there is an accident or incident, there is a need for centers to exchange information related to the involvement of hazardous materials. This will be important for providing health and safety warnings to responders, to enable rapid communication to organizations and teams that specialize in hazmat triage, and to enable situational awareness by state & local fusion centers and national watch centers of the potential transport of illicit HazMat materials. Note that the conveyance involved in the accident or incident may not have been placarded in the case of illicit hazmat materials.

2. page 14, para 2.3.4.6 Need for Current Event Information

Revise last sentence to read: "External centers need to obtain current event information from owner centers such as a description, location, severity, hazardous materials involved, and status of the event."

3. page 15, para 2.3.4.11.1 Need to Filter Event Recaps

Revise last sentence to read: "Centers need to share event information that has been filtered based on category, type, location, status, severity, hazardous material code or specified dates and times.

4. page 41, para 3.3.4.4.3 Event Information Request Filter Content

Add a new filter: "Hazardous Material Codes Filter"

3.3.4.4.3.13 Hazardous Material Codes Filter

"The external center shall request filtered event information based upon the hazardous material codes and hazardous material placard codes associated with an event."

5. page 44, para 3.3.4.6.3 Event Element Details

Add a new element: "Event Hazardous Material Code"

3.3.4.6.3.13 Event Hazardous Material Code

"If the owner center supports hazardous material codes, the owner center shall send hazardous material code and hazardous material placard code information as part of the event description information, if the event involves hazardous material."

6. page 54, para 3.3.4.7 Optional Event Information Content

Under 3.3.4.7.2 Event Indicator, add three new elements:

3.3.4.7.2.8 Event HazMat Code

"If the event type is "accidents-and-incidents", the owner center shall provide the identification of any observed or detected hazardous material as part of the event indicator information using CFR Title 49 hazardous material codes."

3.3.4.7.2.9 Event HazMat Placard Code

"If the event type is "accidents-and-incidents", the owner center shall provide the identification of any observed or detected hazardous material as part of the event indicator information using hazardous material placard codes."

3.3.4.7.2.10 Placard Code Displayed Correctly on Vehicle

"If the event type is "accidents-and-incidents", the owner center shall provide an indication of whether or not the conveyance carrying the observed or detected hazardous material was properly placarded for the materials (yes, no, unknown)."

Inputs to TMDD Vol 2

7. page 284-285, para 3.3.8.14 Event Description

Add a choice for name="placard" and type is declared as the HazMat Placard Code.

add a choice for name="hazmat" and type is declared as the Title 49 Hazmat Code.

8. page 460, para 3.4.8 Event Class Data Elements

Add a new data element to enable identifying the hazardous material placard codes for an Event that involves transportation of hazardous materials.

Add a new data element to enable identifying the CFR Title 49 hazardous material codes for an Event that involves transportation of hazardous materials.

Add a new data element to indicate if the conveyance involved in Event was placarded properly for the observed or detected hazardous materials, in the event hazardous materials are involved in the Event.

Resolution: Comment Status: Closed Disposition: Accepted

1. Added support for Hazmat-Incident related information. User needs were updated (See Section 2.3.4.2), and requirements and design elements for hazmat-incident information were added.

Version Comment Addressed: TMDD v3.02 Dra

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1240	UC132	Raman Patel	TMDD v3.01 Draft (v6)	Volum	TMDD v3.01 Draft (v6)	Section 4.1.3

Comment: Would you consider using Standard Clause instead of plural for Standards Clause in last column of the RTM?

Since we list one design for each requirement (DC Type), standard is also one. Plural suggests there are more than one standards needed for a DC Type and that violates RTM.

Resolution: Comment Status: Closed Disposition: Accepted

Updated Section 4.1.3 title to Data Concept Name and Standard Clause Columns.

Version Comment Addressed: TMDD v3.02 Dra

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1241	UC133	Eduardo Matillano	TMDD v3.02 Draft 1		TMDD v3.02 Draft 1	

Comment: I have a question regarding TMDD 3 Sharing Archive Data feature.

Which field on the "Optional Traffic Monitoring Data Inventory Content" contains the contents of the data set? I see a field called "Uniform Resource Locator (URL)". The description of it is,

3.3.7.1.1.3.2.7 Uniform Resource Locator (URL)

The owner center shall provide the URL information for where a graphical representation of the data set can be found as part of the traffic monitoring data inventory.

I know this says that it is the location of the graphical representation of the data set but can it be the location of the actual data set? I see no other fields to put the actual data set or a location of it.

Resolution: Comment Status: Closed Disposition: Accepted

Yes, you should use the URL field for the location of the actual data set. Reading the definition of URL in that section, I agree it is unclear. Updated in TMDD v3.03.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1242	UC134	Dan Carlson	TMDD v3.02 Draft 1		TMDD v3.02 Draft 1	

Comment: I am working on the ICMS project in San Diego which has a large TMDD 3 C2C service. We are required to provide weather information, both current conditions and forecasted conditions. We are using eSSInventory and eSSObservationReportMessage for the current conditions, but don't see a structure to use for forecasted conditions. ESS doesn't seem appropriate for forecasts. Am I missing something or are forecasts not part of a standard center to center feed?

Resolution: Comment Status: Closed Disposition: Informative

There are 3 types of events supported in TMDD - existing, planned and forecasts. Existing is pretty clear, and planned events are like construction or special events (football games). Forecasted events are supported for things like weather forecasts. Each "forecast" would cover a section or sections of roadway or a roadway network.

The weather information can be found in the event quantity data frame under the event description data frame. In Volume 1, look at Section 3.3.4.6.3.6.1, Event Quantity. .d is road weather information and .f is surface conditions. Unfortunately, to send this, you'll have to deal with the whole full event update message (fEUMsg and its many mandatory elements - See Section 3.3.4.6).

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1243	UC135	Walter Crear	TMDD v3.02 Draft 1		TMDD v3.02 Draft 1	

Comment: The AutomaticValuesChecked spreadsheet lists the values that will automatically checked by the test suite during a test. On line 15:

User Need 2.3.6.1.5 – Need for Detector Data Correlation is traced to Requirement 3.3.6.2.1.4 in the NRTM of Volume I. Requirement 3.3.6.2.1.4 states that

REQ414 The requirements for detector inventory requests from an external center to an owner center are found in Section 3.3.6.1.1.1, "Contents of Device Information Request", with the device type set to "detector" and device information type set to "device inventory." For implementations where detector inventory information polling occurs at the detector station, the device identifier shall be the identifier of the detector station.

Shouldn't this need instead trace to requirement 3.3.6.2.3.4.1 which states that

The detector data request sent from an external center to an owner center shall include:

Generic device information request (See Section 3.3.6.1.1.1), with the device type set to "detector" and device information type set to "device data."

I highlighted rows 8 and 9 as well. These may be correct as traced but I wasn't sure what makes these need/requirements any different from rows 6 and 7. The need to Share Link State and the need to Share Link Data appear to be satisfied by the exact same implementation. The same applies to the need to Share Route State and the need to Share Route Data. (Note: that I found no usage for the network inventory enumeration value within the standard.)

Resolution: Comment Status: Closed Disposition: Accepted
Actually, I think the trace to device inventory is not wrong, but agree that the trace to device data is more correct. However, one part of the user need is to determine what lane the detector is located on, and that information is only available in the device inventory message - it is not part of the detector data message. Thus, no change was made to the traceability.

As for rows 8/9, the state indicates if the link/route is open, closed or restricted; while the data is the speed, volume and occupancy. They happen to trace to the same requirements. There were some pretty strong insistence that the states be separate user needs.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1244	UC135	Walter Crear	TMDD v3.02 Draft 1		TMDD v3.02 Draft 1	

Comment: Spreadsheet NRTMInstancesNotInNRTM lists the requirements that are found in the NRTM but are not included in the RTM. All of these items should appear within the TMDD RTM in Volume II.

Resolution: Comment Status: Closed Disposition: Accepted
Checked the NRTM and RTM. Most of the problems are numbering problems in the NRTM. Corrected.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1245	UC135	Walter Crear	TMDD v3.02 Draft 1		TMDD v3.02 Draft 1	

Comment: The third spreadsheet identifies the requirements that we don't have test cases for in the TMDD Test Suite. Requirements associated with UNID 2.3.1.2, 2.3.1.3 and 2.3.1.4 were expected. The others were not expected and are the result of either the RTM errors mentioned earlier, or the result of a violation of the rules we established for automation. Since modifying the automation tool to correct for these errors is not in our scope, these requirements will not be traced to a test case. The RTM related errors are highlighted in yellow.

Resolution: Comment Status: Closed Disposition: Accepted

I went thru these and I'm not sure why the ones for UN 2.3.6.4.8, Need to Share DMS Message Appearance, Reqts 3.3.6.5.1.5.2.2 to 3.3.6.5.1.5.2.16 is in this list.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1246	UC135	Walter Crear	TMDD v3.02 Draft 1		TMDD v3.02 Draft 1	

Comment: In volume 1 the Predicate Table contains:

Predicate: Subscriptions
Sections: 3.3.1.1.2 OR 3.3.1.1.3

However, throughout the NRTM, Subscription is used instead of Subscriptions. I recommend changing the predicate name in this table to Subscription to match up with the NRTM. I'm already doing this within the TMDD Test Suite.

Resolution: Comment Status: Closed Disposition: Accepted

Updated the predicate name in the predicate table in Section 5.3.2 to be Subscription.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1247	UC136	Blake Christie	TMDD v3.02 Draft 1	vii	TMDD v3.02 Draft 1	History

Comment: 19. Several errors were found and corrected in the tmdd.xsd, including:

- Deleted the Object classes "ExternalCenter" and "OwnerCenter"

Why was this deleted from the XML and not the ASN.1? Please clarify.

Resolution: Comment Status: Closed Disposition: Accepted

At first glance, the object classes were not needed for the XML version of the standard, but upon looking at the ASN.1 version, the object classes are needed. Added the object classes back in.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1248	UC136	Blake Christie	TMDD v3.02 Draft 1	8	TMDD v3.02 Draft 1	

Comment: NTCIP 1203 Object Definitions for Dynamic Message Signs (DMS) – v02.39b Recommended Standard November 2010

A published standard cannot reference a recommended standard. Please clarify.

Resolution: Comment Status: Closed Disposition: Accepted

Updated the normative reference for NTCIP 1203 from NTCIP 1203 v02.39b to NTCIP 1203 v03.05. There were no changes in the referenced data elements between v02.39b and v03.05, except for minor changes in the element descriptions to clarify ambiguities for vmsHorizontalPitch, vmsVerticalPitch, and dmsColorScheme.

Version Comment Addressed: TMDD v3.1

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1249	UC136	Blake Christie	TMDD v3.02 Draft 1	8	TMDD v3.02 Draft 1	

Comment: NTCIP 1205 Object Definitions for Closed Circuit Television (CCTV) Camera Control – v01.08 Published Standard February 2001

NTCIP 1205v01.08 was published in December 2001.

Please Clarify.

Resolution: Comment Status: Closed Disposition: Accepted
Called Jean Johnson from NEMA and her records indicate it is NTCIP 1205:2001, published December 2001, but version v01.08.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1250	UC136	Blake Christie	TMDD v3.02 Draft 1	8	TMDD v3.02 Draft 1	

Comment: NTCIP 1205 Object Definitions for Closed Circuit Television (CCTV) Camera Control – v01.08 Published Standard February 2001

NTCIP 1205v01.08b was published in December 2001.

Please clarify.

Resolution: Comment Status: Closed Disposition: Accepted
Called Jean Johnson from NEMA and her records indicate it is NTCIP 1205:2001, published December 2001, but version v01.08.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1251	UC136	Blake Christie	TMDD v3.02 Draft 1	8	TMDD v3.02 Draft 1	

Comment: NTCIP 1207 Object Definitions for Ramp Meter Control (RMC) Units – v01.17 Published Standard November 2001

NTCIP 1207v01.17a was published in November 2001.

Please Clarify.

Resolution: Comment Status: Closed Disposition: Accepted
Checked with Jean Johnson from NEMA. Her records indicate it is NTCIP:2001, Version v01.17, November 2001. Updated the table.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1252	UC136	Blake Christie	TMDD v3.02 Draft 1	8	TMDD v3.02 Draft 1	

Comment: NTCIP 1209 Object Definitions for Transportation Sensor Systems (TSS) – v02.17b Recommended Standard December 2010.

A published standard cannot reference a recommended standard.

Please clarify.

Resolution: Comment Status: Closed Disposition: Accepted
Updated the normative reference for NTCIP 1209 from NTCIP 1209 v02.17b to NTCIP 1209 v02.18. There are no changes in the referenced data elements between v02.17b and v02.18.

Version Comment Addressed: TMDD v3.1

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1253	UC136	Blake Christie	TMDD v3.02 Draft 1	8	TMDD v3.02 Draft 1	

Comment: SAE-J2630 Converting ATIS Message Standards From ASN.1 to XML
Balloted Standard December 2003

Please consider referencing the November 2009 version.

Please clarify.

Resolution: Comment Status: Closed Disposition: Rejected
I cannot find any indication of a November 2009 version. Further discussions with the author of this comment indicated there was an error, so this comment was withdrawn

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1254	UC136	Blake Christie	TMDD v3.02 Draft 1	16	TMDD v3.02 Draft 1	2.3.2 Need to Support Authentication and Restrictions

Comment: This need does not show up in the NRTM nor does any requirements from section 3.3.2.

Please include requirement from section 3.3.2 in the NRTM.

Resolution: Comment Status: Closed Disposition: Accepted
The text in 2.3.2 indicates that the user need has been removed. Will add requirement 3.3.2.x to the RTM.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1255	UC136	Blake Christie	TMDD v3.02 Draft 1	16	TMDD v3.02 Draft 1	2.3.3 Need to Provide Information on Organizations, Centers, and Contacts

Comment: The Standard Need could not be located in the NRTM. A similar need was located: 2.3.3 Need to Provide Information on Organizations

Please correct inconsistent titles.

Resolution: Comment Status: Closed Disposition: Accepted
The title has been updated.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1256	UC136	Blake Christie	TMDD v3.02 Draft 1	19	TMDD v3.02 Draft 1	2.3.6.1.2 Need Updated Detector Inventory

Comment: The Standard Need could not be located in the NRTM.

Please add the missing need and provide the associated requirement(s) mapping in the NRTM.

Resolution: Comment Status: Closed Disposition: Accepted
Added missing user need and the associated requirements.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1257	UC136	Blake Christie	TMDD v3.02 Draft 1	32	TMDD v3.02 Draft 1	2.3.6.10.12 Need to Monitor Signal Operations

Comment: The Standard Need could not be located in the NRTM. A similar need was located: 2.3.6.10.12 Need to Monitor Signal Operation

Please correct inconsistent titles.

Resolution: Comment Status: Closed Disposition: Accepted
Corrected NRTM to Need to Monitor Signal Operations.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1258	UC136	Blake Christie	TMDD v3.02 Draft 1	35,159	TMDD v3.02 Draft 1	2.3.8 Need to Accept Null Values, 3.3.9 Accept Null Values

Comment: Although referenced in the History on page v, "User Need 2.3.8 Need to Accept Null Values. becomes a generic (architectural requirement)", the need appears in the standard, but not the NRTM.

Also requirement 3.3.9 Accept Null Values cannot be located in the NRTM or RTM.

Please delete the need and create a new constraints section for this design requirement.

Resolution: Comment Status: Closed Disposition: Accepted
User need and requirements have been deleted. The design constrain for support of Null Values are found in Volume II, Section 2.5

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1259	UC136	Blake Christie	TMDD v3.02 Draft 1	38	TMDD v3.02 Draft 1	3.3.1.4.1.2 Optional Error Report Contents, 3.3.1.4.1.2.1 Restrictions

Comment: The requirement was found in the NRTM to be 3.3.1.4.1.2 Restrictions.

Please correct the section number reference.

Resolution: Comment Status: Closed Disposition: Accepted
The section number in the NRTM has been updated to 3.3.1.4.1.2.1 Restrictions.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1260	UC136	Blake Christie	TMDD v3.02 Draft 1	39	TMDD v3.02 Draft 1	3.3.2.1.1, 3.3.2.1.1.1, 3.3.2.1.1.2.1, 3.3.2.2.1

Comment: The Standard Requirement could not be located in the NRTM.

•Please include the requirements in section 3.3.2 into the NRTM.

Resolution: Comment Status: Closed Disposition: Accepted
These requirements have been added to the NRTM in Table 4 of Section 5.5.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1261	UC136	Blake Christie	TMDD v3.02 Draft 1	46	TMDD v3.02 Draft 1	3.3.4.6.3.1 Required Event Headline Information

Comment: Event headline information sent from an owner center to an external center shall include the event type. Supported values shall include traffic conditions, accidents and incidents, closures, roadwork, obstruction, delay status cancellation, unusual driving, mobile situation, device status, restriction class, <incident response status>, disasters, disturbances, sporting events, special events, parking information,

Why is this high-lighted in a recommended standard? (incident response status)

Please clarify.

Resolution: Comment Status: Closed Disposition: Accepted

The highlight has been removed.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1262	UC136	Blake Christie	TMDD v3.02 Draft 1	60	TMDD v3.02 Draft 1	3.3.4.8.4.1 Required Action Log Information Content

Comment: The Standard Requirement could not be located in the NRTM.

Please add the missing NRTM reference.

Resolution: Comment Status: Closed Disposition: Accepted

Added requirement 3.3.4.8.4.1 Required Action Log Information Content to the NRTM.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1263	UC136	Blake Christie	TMDD v3.02 Draft 1	60	TMDD v3.02 Draft 1	3.3.4.8.4.2.1 Restrictions

Comment: The Standard Requirement could not be located in the NRTM. A similar requirement was found: 3.3.4.8.4.2.1 Restriction

Please correct for inconsistent titles.

Resolution: Comment Status: Closed Disposition: Accepted

Updated the NRTM to read 3.3.4.8.4.2.1 Restrictions.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1264	UC136	Blake Christie	TMDD v3.02 Draft 1	76	TMDD v3.02 Draft 1	3.3.6.1.1.1.3 Content of Device Information Request Filter

Comment: This section is a header and does not contain a 'shall' statement.

Remove section 3.3.6.1.1.1.3 references from the NRTM.

Resolution: Comment Status: Closed Disposition: Accepted

Section 3.3.6.1.1.1.3 Content of Device Information Request Filter has been removed from the NRTM and also the RTM.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1265	UC136	Blake Christie	TMDD v3.02 Draft 1	77	TMDD v3.02 Draft 1	3.3.6.1.2.1.2.1 Restrictions

Comment: The Standard Requirement could not be located in the NRTM. A requirement was found with the same section number: 3.3.6.1.2.1.2.1 Authentication

Please correct the section number reference.

Resolution: Comment Status: Closed Disposition: Accepted

Updated the NRTM to be 3.3.6.1.2.1.2.1 Restrictions.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1266	UC136	Blake Christie	TMDD v3.02 Draft 1	81	TMDD v3.02 Draft 1	3.3.6.1.5.2.1 Required Device Control Status Request Content

Comment: The Standard Requirement could not be located in the NRTM.

Please add the missing NRTM reference.

Resolution: Comment Status: Closed Disposition: Accepted

Added the requirement, 3.3.6.1.5.2.1 Required Device Control Status Request Content, under the appropriate user needs.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1267	UC136	Blake Christie	TMDD v3.02 Draft 1	81	TMDD v3.02 Draft 1	3.3.6.1.5.2.2.1 Authentication

Comment: The Standard Requirement could not be located in the NRTM.

Please add the missing NRTM reference.

Resolution: Comment Status: Closed Disposition: Accepted

Added 3.3.6.1.5.2.2.1 Authentication to the NRTM under the appropriate user needs.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1268	UC136	Blake Christie	TMDD v3.02 Draft 1	82	TMDD v3.02 Draft 1	3.3.6.1.7.1.1 Required Device Priority Queue Request Content

Comment: The Standard Requirement could not be located in the NRTM.

Please add the missing NRTM reference.

Resolution: Comment Status: Closed Disposition: Accepted

Added 3.3.6.1.7.1.1 Required Device Priority Queue Request Content to the NRTM.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1269	UC136	Blake Christie	TMDD v3.02 Draft 1	82	TMDD v3.02 Draft 1	3.3.6.1.7.1.2.1 Authentication

Comment: The Standard Requirement could not be located in the NRTM.

Please add the missing NRTM reference.

Resolution: Comment Status: Closed Disposition: Accepted
Added 3.3.6.1.7.1.2.1 Authentication to the NRTM under the appropriate user needs.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1270	UC136	Blake Christie	TMDD v3.02 Draft 1	83	TMDD v3.02 Draft 1	3.3.6.1.8.1 Contents of Device Schedule Information

Comment: The Standard Requirement could not be located in the NRTM.

Please add the missing NRTM reference.

Resolution: Comment Status: Closed Disposition: Accepted
Added 3.3.6.1.8.1 Contents of Device Schedule Information to the NRTM under the appropriate user needs.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1271	UC136	Blake Christie	TMDD v3.02 Draft 1	83	TMDD v3.02 Draft 1	3.3.6.1.8.1.1 Required Device Schedule Information Content

Comment: The Standard Requirement could not be located in the NRTM.

Please add the missing NRTM reference.

Resolution: Comment Status: Closed Disposition: Accepted
Added 3.3.6.1.8.1.1 Required Device Schedule Information Content to the NRTM under the appropriate user needs.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1272	UC136	Blake Christie	TMDD v3.02 Draft 1	84	TMDD v3.02 Draft 1	3.3.6.1.8.1.2.1 Restrictions

Comment: The Standard Requirement could not be located in the NRTM.

Please add the missing NRTM reference.

Resolution: Comment Status: Closed Disposition: Accepted
Added 3.3.6.1.8.1.2.1 Restrictions, to the NRTM under the appropriate user needs.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1273	UC136	Blake Christie	TMDD v3.02 Draft 1	88	TMDD v3.02 Draft 1	3.3.6.2.3.5.2.2 Detector Station

Comment: The Standard Requirement could not be located in the NRTM. A requirement was found with the same section number: 3.3.6.2.3.5.2.2 Owner Organization

Please correct the section number reference.

Resolution: Comment Status: Closed Disposition: Accepted

Corrected the section numbering and requirement titles for 3.3.6.2.3.5.2.x. in the NRTM.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1274	UC136	Blake Christie	TMDD v3.02 Draft 1	88	TMDD v3.02 Draft 1	3.3.6.2.3.5.2.3 Vehicle Count

Comment: The Standard Requirement could not be located in the NRTM. A requirement was found with the same section number: 3.3.6.2.3.5.2.3 Detector Station

Please correct the section number reference.

Resolution: Comment Status: Closed Disposition: Accepted

Corrected the section numbering and requirement titles for 3.3.6.2.3.5.2.x. in the NRTM.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1275	UC136	Blake Christie	TMDD v3.02 Draft 1	88	TMDD v3.02 Draft 1	3.3.6.2.3.5.2.4 Average Vehicle Occupancy

Comment: The Standard Requirement could not be located in the NRTM. A requirement was found with the same section number: 3.3.6.2.3.5.2.4 Data Collection Start

Please correct the section number reference.

Resolution: Comment Status: Closed Disposition: Accepted

Corrected the section numbering and requirement titles for 3.3.6.2.3.5.2.x. in the NRTM.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1276	UC136	Blake Christie	TMDD v3.02 Draft 1	88	TMDD v3.02 Draft 1	3.3.6.2.3.5.2.5 REQ380 Data Collection Start

Comment: The Standard Requirement could not be located in the NRTM. A requirement was found with the same section number: 3.3.6.2.3.5.2.5 Data Collection End

Please correct the section number reference.

Resolution: Comment Status: Closed Disposition: Accepted

Corrected the section numbering and requirement titles for 3.3.6.2.3.5.2.x. in the NRTM.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1277	UC136	Blake Christie	TMDD v3.02 Draft 1	88	TMDD v3.02 Draft 1	3.3.6.2.3.5.2.6 Data Collection End

Comment: The Standard Requirement could not be located in the NRTM. A requirement was found with the same section number: 3.3.6.2.3.5.2.6 Data Type

Please correct the section number reference.

Resolution: Comment Status: Closed Disposition: Accepted

Corrected the section numbering and requirement titles for 3.3.6.2.3.5.2.x. in the NRTM.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1278	UC136	Blake Christie	TMDD v3.02 Draft 1	88	TMDD v3.02 Draft 1	3.3.6.2.3.5.2.7 Data Type

Comment: The Standard Requirement could not be located in the NRTM. A requirement was found with the same section number: 3.3.6.2.3.5.2.7 Average Vehicle Speed

Please correct the section number reference.

Resolution: Comment Status: Closed Disposition: Accepted

Corrected the section numbering and requirement titles for 3.3.6.2.3.5.2.x. in the NRTM.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1279	UC136	Blake Christie	TMDD v3.02 Draft 1	88	TMDD v3.02 Draft 1	3.3.6.2.3.5.2.8 Average Vehicle Speed

Comment: The Standard Requirement could not be located in the NRTM. A requirement was found with the same section number: 3.3.6.2.3.5.2.8 Average Vehicle Queue

Please correct the section number reference.

Resolution: Comment Status: Closed Disposition: Accepted

Corrected the section numbering and requirement titles for 3.3.6.2.3.5.2.x. in the NRTM.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1280	UC136	Blake Christie	TMDD v3.02 Draft 1	88	TMDD v3.02 Draft 1	3.3.6.2.3.5.2.9 Average Vehicle Queue

Comment: The Standard Requirement could not be located in the NRTM. A requirement was found with the same section number: 3.3.6.2.3.5.2.9 Vehicle Stops

Please correct the section number reference.

Resolution: Comment Status: Closed Disposition: Accepted

Corrected the section numbering and requirement titles for 3.3.6.2.3.5.2.x. in the NRTM.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1281	UC136	Blake Christie	TMDD v3.02 Draft 1	89	TMDD v3.02 Draft 1	3.3.6.2.3.5.2.10 Vehicle Stops

Comment: The Standard Requirement could not be located in the NRTM. A requirement was found with the same section number: 3.3.6.2.3.5.2.10 Vehicle Count - Bin 1

Please correct the section number reference.

Resolution: Comment Status: Closed Disposition: Accepted

Corrected the section numbering and requirement titles for 3.3.6.2.3.5.2.x. in the NRTM.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1282	UC136	Blake Christie	TMDD v3.02 Draft 1	89	TMDD v3.02 Draft 1	3.3.6.2.3.5.2.11 Vehicle Count - Bin 1

Comment: The Standard Requirement could not be located in the NRTM. A requirement was found with the same section number: 3.3.6.2.3.5.2.11 Vehicle Count - Bin 2

Please correct the section number reference.

Resolution: Comment Status: Closed Disposition: Accepted

Corrected the section numbering and requirement titles for 3.3.6.2.3.5.2.x. in the NRTM.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1283	UC136	Blake Christie	TMDD v3.02 Draft 1	89	TMDD v3.02 Draft 1	3.3.6.2.3.5.2.12 Vehicle Count - Bin 2

Comment: The Standard Requirement could not be located in the NRTM. A requirement was found with the same section number: 3.3.6.2.3.5.2.12 Vehicle Count - Bin 3

Please correct the section number reference.

Resolution: Comment Status: Closed Disposition: Accepted

Corrected the section numbering and requirement titles for 3.3.6.2.3.5.2.x. in the NRTM.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1284	UC136	Blake Christie	TMDD v3.02 Draft 1	89	TMDD v3.02 Draft 1	3.3.6.2.3.5.2.13 Vehicle Count - Bin 3

Comment: The Standard Requirement could not be located in the NRTM. A requirement was found with the same section number: 3.3.6.2.3.5.2.13 Vehicle Count - Bin 4

Please correct the section number reference.

Resolution: Comment Status: Closed Disposition: Accepted

Corrected the section numbering and requirement titles for 3.3.6.2.3.5.2.x. in the NRTM.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1285	UC136	Blake Christie	TMDD v3.02 Draft 1	89	TMDD v3.02 Draft 1	3.3.6.2.3.5.2.14 Vehicle Count - Bin 4

Comment: The Standard Requirement could not be located in the NRTM. A requirement was found with the same section number: 3.3.6.2.3.5.2.14 Vehicle Count - Bin 5

Please correct the section number reference.

Resolution: Comment Status: Closed Disposition: Accepted
Corrected the section numbering and requirement titles for 3.3.6.2.3.5.2.x. in the NRTM.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1286	UC136	Blake Christie	TMDD v3.02 Draft 1	89	TMDD v3.02 Draft 1	3.3.6.2.3.5.2.15 Vehicle Count - Bin 5

Comment: The Standard Requirement could not be located in the NRTM.

Please add the missing NRTM reference.

Resolution: Comment Status: Closed Disposition: Accepted
Corrected the section numbering and requirement titles for 3.3.6.2.3.5.2.x. in the NRTM.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1287	UC136	Blake Christie	TMDD v3.02 Draft 1	97	TMDD v3.02 Draft 1	3.3.6.4.4 Request Video Switch Control Status

Comment: The Requirement Section number could not be located in the Standard.

Please correct missing section number.

Resolution: Comment Status: Closed Disposition: Accepted
Requirement 3.3.6.4.4 does appear in the Section, in the NRTM under User Need 2.3.6.3.5, Need to Verify Video Switch Control Status, and in the RTM in Word version of the standard, but does not appear in the .pdf version. Fixed and will confirm.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1288	UC136	Blake Christie	TMDD v3.02 Draft 1	101	TMDD v3.02 Draft 1	3.3.6.5.2.5.2.4 Message Beacon

Comment: The Standard Requirement could not be located in the NRTM.

Please add the missing NRTM reference.

Resolution: Comment Status: Closed Disposition: Accepted
Added 3.3.6.5.2.5.2.4 Message Beacon to the appropriate user need, Need to Share DMS Status.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1289	UC136	Blake Christie	TMDD v3.02 Draft 1	108	TMDD v3.02 Draft 1	3.3.6.6.3.1 Send ESS Observation Data Information Upon Request

Comment: The Standard Requirement could not be located in the NRTM. A similar requirement was found: 3.3.6.6.3.1 Send ESS Observation Data Upon Request

Please correct inconsistent titles.

Resolution: Comment Status: Closed Disposition: Accepted
Updated the entries in the NRTM to 3.3.6.6.3.1, Send ESS Observation Data Information Upon Request.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1290	UC136	Blake Christie	TMDD v3.02 Draft 1	108	TMDD v3.02 Draft 1	3.3.6.6.3.2 Publish ESS Observation Data Information

Comment: The Standard Requirement could not be located in the NRTM. A similar requirement was found: 3.3.6.6.3.2 Publish ESS Observation Data

Please correct inconsistent titles.

Resolution: Comment Status: Closed Disposition: Accepted
Updated entries in the NRTM to be 3.3.6.6.3.2, Publish ESS Observation Data Information.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1291	UC136	Blake Christie	TMDD v3.02 Draft 1	108	TMDD v3.02 Draft 1	3.3.6.6.3.5.1 Required ESS Observation Data Information Content

Comment: The Standard Requirement could not be located in the NRTM. A similar requirement was found: 3.3.6.6.3.5.1 Required ESS Observation Data Content

Please correct inconsistent titles.

Resolution: Comment Status: Closed Disposition: Accepted
Updated the entry in the NRTM to be 3.3.6.6.3.5.1, Required ESS Observation Data Information Content.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1292	UC136	Blake Christie	TMDD v3.02 Draft 1	119	TMDD v3.02 Draft 1	3.3.6.6.4.3.12 Restrictions

Comment: The Standard Requirement could not be located in the NRTM.

Please add the missing NRTM reference.

Resolution: Comment Status: Closed Disposition: Accepted
Added requirement 3.3.6.6.4.3.12 Restrictions to the appropriate user needs in the NRTM.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1293	UC136	Blake Christie	TMDD v3.02 Draft 1	125	TMDD v3.02 Draft 1	3.3.6.8.7.5.2.2 Message Date and Time Change Information

Comment: The Standard Requirement could not be located in the NRTM. A requirement was found with the same section number: 3.3.6.8.7.5.2.2 Owner Organization

Please correct the section number reference.

Resolution: Comment Status: Closed Disposition: Accepted
Updated the requirement 3.3.6.8.7.5.2.2 to be Message Date and Time Change Information and deleted 3.3.6.8.7.5.2.3.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1294	UC136	Blake Christie	TMDD v3.02 Draft 1	148	TMDD v3.02 Draft 1	3.3.6.11.7.5.2.5 Vehicle Clearance

Comment: The Standard Requirement could not be located in the NRTM. A similar requirement was found: 3.3.6.11.7.5.2.5 Vehicle Clearance Duration

Please correct inconsistent titles.

Resolution: Comment Status: Closed Disposition: Accepted
Corrected the title for 3.3.6.11.7.5.2.5 to be Vehicle Clearance Duration.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1295	UC136	Blake Christie	TMDD v3.02 Draft 1	148	TMDD v3.02 Draft 1	3.3.6.11.7.5.2.8 Vehicle Red

Comment: The Standard Requirement could not be located in the NRTM. A requirement was found with the same section number: 3.3.6.11.7.5.2.8 Pedestrian Clearance Duration

Please correct the section number reference

Resolution: Comment Status: Closed Disposition: Accepted
Updated Section 3.3.6.11.7.5.2.8 to be Pedestrian Clearance Duration in the document and in the NRTM. Updated 3.3.6.11.7.5.2.6 to be Vehicle Red Duration in the document and in the NRTM.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1296	UC136	Blake Christie	TMDD v3.02 Draft 1	148	TMDD v3.02 Draft 1	3.3.6.11.7.5.2.9 Minimum Walk Duration

Comment: The Standard Requirement could not be located in the NRTM. A requirement was found with the same section number: 3.3.6.11.7.5.2.9 Steady-dont-walk Duration

Please correct the section number reference.

Resolution: Comment Status: Closed Disposition: Accepted
Updated Section 3.3.6.11.7.5.2.7 to be Minimum Walk Duration in the document and in the NRTM. Updated 3.3.6.11.7.5.2.9 to be Steady-dont-walk Duration in the document and in the NRTM.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1297	UC136	Blake Christie	TMDD v3.02 Draft 1	148	TMDD v3.02 Draft 1	3.3.6.11.7.5.2.10 Pedestrian Clearance Duration

Comment: The Standard Requirement could not be located in the NRTM. A requirement was found with the same section number: 3.3.6.11.7.5.2.10 Phase Sequence Information

Please correct the section number reference.

Resolution: Comment Status: Closed Disposition: Accepted
Updated Section 3.3.6.11.7.5.2.8 to be Pedestrian Clearance Duration in the document and in the NRTM. Updated 3.3.6.11.7.5.2.10 to be Phase Sequence Information in the document and in the NRTM.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1298	UC136	Blake Christie	TMDD v3.02 Draft 1	148	TMDD v3.02 Draft 1	3.3.6.11.7.5.2.11 Steady-dont-walk Duration

Comment: The Standard Requirement could not be located in the NRTM. A requirement was found with the same section number: 3.3.6.11.7.5.2.11 Inventory Date and Time Change Information

Please correct the section number reference.

Resolution: Comment Status: Closed Disposition: Accepted
Updated Section 3.3.6.11.7.5.2.9 to be Steady-dont-walk Duration in the document and in the NRTM. Updated 3.3.6.11.7.5.2.11 to be Inventory Date and Time Change Information in the document and in the NRTM.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1299	UC136	Blake Christie	TMDD v3.02 Draft 1	148	TMDD v3.02 Draft 1	3.3.6.11.7.5.2.12 Phase Sequence Information

Comment: The Standard Requirement could not be located in the NRTM.

Please add the missing NRTM reference.

Resolution: Comment Status: Closed Disposition: Accepted
Phase Sequence Information was updated to be Section 3.3.6.11.7.5.2.10. The section number and title were updated in the NRTM.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1300	UC136	Blake Christie	TMDD v3.02 Draft 1	148	TMDD v3.02 Draft 1	3.3.6.11.7.5.2.13 Inventory Date and Time Change Information

Comment: The Standard Requirement could not be located in the NRTM.

Please add the missing NRTM reference.

Resolution: Comment Status: Closed Disposition: Accepted
Inventory Date and Time Change Information was updated to be Section 3.3.6.11.7.5.2.11. The section number and title were updated in the NRTM.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1301	UC136	Blake Christie	TMDD v3.02 Draft 1	152	TMDD v3.02 Draft 1	3.3.6.11.10.2.1 Required Section Control Status Request Content

Comment: The Standard Requirement could not be located in the NRTM.

Please add the missing NRTM reference.

Resolution: Comment Status: Closed Disposition: Accepted
Added 3.3.6.11.10.2.1 Required Section Control Status Request Content to the NRTM under the appropriate user need, 2.3.6.10.15, Need to Verify Section Plan Status.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1302	UC136	Blake Christie	TMDD v3.02 Draft 1	152	TMDD v3.02 Draft 1	3.3.6.11.10.2.2.1 Authentication

Comment: The Standard Requirement could not be located in the NRTM.

Please add the missing NRTM reference.

Resolution: Comment Status: Closed Disposition: Accepted
Added 3.3.6.11.10.2.2.1 Authentication to the NRTM under the appropriate user need, 2.3.6.10.15, Need to Verify Section Plan Status.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1303	UC136	Blake Christie	TMDD v3.02 Draft 1	187	TMDD v3.02 Draft 1	NRTM Requirement: 3.3.4.6.4.6.3.10 Alternate Link Location

Comment: The NRTM requirement cannot be found in the Standard.

Please correct the section number reference.

Resolution: Comment Status: Closed Disposition: Accepted
The section number was misnumbered in the NRTM. It has been corrected to be 3.3.4.6.4.7.3.10 Alternate Link Location.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1304	UC136	Blake Christie	TMDD v3.02 Draft 1	187	TMDD v3.02 Draft 1	NRTM Requirement: 3.3.4.6.4.6.4 Required Point on a Link Location Information

Comment: The NRTM requirement cannot be found in the Standard.

Please correct the section number reference.

Resolution: Comment Status: Closed Disposition: Accepted
The section number was misnumbered in the NRTM. It has been corrected to be 3.3.4.6.4.7.4 Required Point on a Link Location Information.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1305	UC136	Blake Christie	TMDD v3.02 Draft 1	187	TMDD v3.02 Draft 1	NRTM Requirement: 3.3.4.6.4.6.5.1 Linear Reference Location

Comment: The NRTM requirement cannot be found in the Standard.

Please correct the section number reference.

Resolution: Comment Status: Closed Disposition: Accepted
The section number was misnumbered in the NRTM. It has been corrected to be 3.3.4.6.4.7.5.1 Linear Reference Location.
Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1306	UC136	Blake Christie	TMDD v3.02 Draft 1	187	TMDD v3.02 Draft 1	NRTM Requirement: 3.3.4.6.4.6.5.2 Link Name

Comment: The NRTM requirement cannot be found in the Standard.

Please correct the section number reference.

Resolution: Comment Status: Closed Disposition: Accepted
The section number was misnumbered in the NRTM. It has been corrected to be 3.3.4.6.4.7.5.2 Link Name.
Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1307	UC136	Blake Christie	TMDD v3.02 Draft 1	187	TMDD v3.02 Draft 1	NRTM Requirement: 3.3.4.6.4.6.5.3 Point Name

Comment: The NRTM requirement cannot be found in the Standard.

Please correct the section number reference.

Resolution: Comment Status: Closed Disposition: Accepted
The section number was misnumbered in the NRTM. It has been corrected to be 3.3.4.6.4.7.5.3 Point Name.
Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1308	UC136	Blake Christie	TMDD v3.02 Draft 1	187	TMDD v3.02 Draft 1	NRTM Requirement: 3.3.4.6.4.6.5.4 Cross Street Identifier

Comment: The NRTM requirement cannot be found in the Standard.

Please correct the section number reference.

Resolution: Comment Status: Closed Disposition: Accepted
The section number was misnumbered in the NRTM. It has been corrected to be 3.3.4.6.4.7.5.4 Cross Street Identifier.
Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1309	UC136	Blake Christie	TMDD v3.02 Draft 1	187	TMDD v3.02 Draft 1	NRTM Requirement: 3.3.4.6.4.6.5.5 Cross Street Name

Comment: The NRTM requirement cannot be found in the Standard.

Please correct the section number reference.

Resolution: Comment Status: Closed Disposition: Accepted
The section number was misnumbered in the NRTM. It has been corrected to be 3.3.4.6.4.7.5.5 Cross Street Name.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1310	UC136	Blake Christie	TMDD v3.02 Draft 1	187	TMDD v3.02 Draft 1	NRTM Requirement: 3.3.4.6.4.6.5.6 Signed Destination

Comment: The NRTM requirement cannot be found in the Standard.

Please correct the section number reference.

Resolution: Comment Status: Closed Disposition: Accepted
The section number was misnumbered in the NRTM. It has been corrected to be 3.3.4.6.4.7.5.6 Signed Destination.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1311	UC136	Blake Christie	TMDD v3.02 Draft 1	187	TMDD v3.02 Draft 1	NRTM Requirement: 3.3.4.6.4.6.5.7 Point Location Rank

Comment: The NRTM requirement cannot be found in the Standard.

Please correct the section number reference.

Resolution: Comment Status: Closed Disposition: Accepted
The section number was misnumbered in the NRTM. It has been corrected to be 3.3.4.6.4.7.5.7 Point Location Rank.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1312	UC136	Blake Christie	TMDD v3.02 Draft 1	187	TMDD v3.02 Draft 1	NRTM Requirement: 3.3.4.6.4.6.5.8 Landmark Type

Comment: The NRTM requirement cannot be found in the Standard.

Please correct the section number reference.

Resolution: Comment Status: Closed Disposition: Accepted
The section number was misnumbered in the NRTM. It has been corrected to be 3.3.4.6.4.7.5.8 Landmark Type.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1313	UC136	Blake Christie	TMDD v3.02 Draft 1	187	TMDD v3.02 Draft 1	NRTM Requirement: 3.3.4.6.4.6.5.9 Secondary Link Location

Comment: The NRTM requirement cannot be found in the Standard.

Please correct the section number reference.

Resolution: Comment Status: Closed Disposition: Accepted
The section number was misnumbered in the NRTM. It has been corrected to be 3.3.4.6.4.7.5.9 Secondary Link Location.
Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1314	UC136	Blake Christie	TMDD v3.02 Draft 1	187	TMDD v3.02 Draft 1	NRTM Requirement: 3.3.4.6.4.6.6 Required Landmark Location Information

Comment: The NRTM requirement cannot be found in the Standard.

Please correct the section number reference.

Resolution: Comment Status: Closed Disposition: Accepted
The section number was misnumbered in the NRTM. It has been corrected to be 3.3.4.6.4.7.6 Required Landmark Location Information.
Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1315	UC136	Blake Christie	TMDD v3.02 Draft 1	188	TMDD v3.02 Draft 1	NRTM Requirement: 3.3.4.6.4.6.7.1 Landmark Point Name

Comment: The NRTM requirement cannot be found in the Standard.

Please correct the section number reference.

Resolution: Comment Status: Closed Disposition: Accepted
The section number was misnumbered in the NRTM. It has been corrected to be 3.3.4.6.4.7.7.1 Landmark Point Name.
Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1316	UC136	Blake Christie	TMDD v3.02 Draft 1	188	TMDD v3.02 Draft 1	NRTM Requirement: 3.3.4.6.4.6.7.2 Landmark Location Rank

Comment: The NRTM requirement cannot be found in the Standard.

Please correct the section number reference.

Resolution: Comment Status: Closed Disposition: Accepted
The section number was misnumbered in the NRTM. It has been corrected to be 3.3.4.6.4.7.7.2 Landmark Location Rank.
Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1317	UC136	Blake Christie	TMDD v3.02 Draft 1	188	TMDD v3.02 Draft 1	NRTM Requirement: 3.3.4.6.4.6.7.3 Landmark Location

Comment: The NRTM requirement cannot be found in the Standard.

Please correct the section number reference.

Resolution: Comment Status: Closed Disposition: Accepted
The section number was misnumbered in the NRTM. It has been corrected to be 3.3.4.6.4.7.3 Landmark Location.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1318	UC136	Blake Christie	TMDD v3.02 Draft 1	188	TMDD v3.02 Draft 1	NRTM Requirement: 3.3.4.6.4.6.7.4 Secondary Landmark Location

Comment: The NRTM requirement cannot be found in the Standard.

Please correct the section number reference.

Resolution: Comment Status: Closed Disposition: Accepted
The section number was misnumbered in the NRTM. It has been corrected to be 3.3.4.6.4.7.3 Secondary Landmark Location.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1319	UC136	Blake Christie	TMDD v3.02 Draft 1	188	TMDD v3.02 Draft 1	NRTM Requirement: 3.3.4.6.4.6.8 Geographic Location

Comment: The NRTM requirement cannot be found in the Standard.

Please correct the section number reference.

Resolution: Comment Status: Closed Disposition: Accepted
The section number was misnumbered in the NRTM. It has been corrected to be 3.3.4.6.4.7.8 Geographic Location.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1320	UC136	Blake Christie	TMDD v3.02 Draft 1	196	TMDD v3.02 Draft 1	NRTM Requirement: 3.3.5.1.1.5.2.1 Restrictions

Comment: The NRTM requirement cannot be found in the Standard.

Please correct the section number reference.

Resolution: Comment Status: Closed Disposition: Accepted
Requirement number 3.3.5.1.1.5.2.1 has been corrected to be Restrictions.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1321	UC136	Blake Christie	TMDD v3.02 Draft 1	256	TMDD v3.02 Draft 1	NRTM Requirement: 3.3.6.11.7.5.2.6 Vehicle Red Duration

Comment: The NRTM requirement cannot be found in the Standard.

Please correct the section number reference.

Resolution: Comment Status: Closed Disposition: Accepted
Section 3.3.6.11.7.5.2.6 was accidentally a repeat of 3.3.6.11.7.5.2.5 due to an error in the Microsoft Word numbering. The title and requirement has been updated to be 3.3.6.11.7.5.2.6 Vehicle Red Duration in the standard and the NRTM.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1322	UC136	Blake Christie	TMDD v3.02 Draft 1	256	TMDD v3.02 Draft 1	NRTM Requirement: 3.3.6.11.7.5.2.7 Minimum Walk Duration

Comment: The NRTM requirement cannot be found in the Standard.

Please correct the section number reference.

Resolution: Comment Status: Closed Disposition: Accepted
Section 3.3.6.11.7.5.2.7 in the standard was accidentally a repeat of 3.3.6.11.7.5.2.5 due to an error in the Microsoft Word numbering. The title and requirement has been updated to be 3.3.6.11.7.5.2.7 Minimum Walk Duration in the standard and the NRTM.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1323	UC136	Blake Christie	TMDD v3.02 Draft 1	239	TMDD v3.02 Draft 1	NRTM Requirement: 3.3.6.8.7.5.2.3 Message Date and Time Change Information

Comment: The NRTM requirement cannot be found in the Standard.

Please correct the section number reference.

Resolution: Comment Status: Closed Disposition: Accepted
The requirement has been removed from the NRTM. The section numbering for Message Date and Time Change Information was changed to be 3.3.6.8.7.5.2.2.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1324	UC136	Blake Christie	TMDD v3.02 Draft 1	14	TMDD v3.02 Draft 1	2.7 TMDD ASN.1 Object Identifiers

Comment: This is shown below with the OID representation next to the data concept type.

1. Object Classes. OID: { tmdd objectClasses (1) }
2. Data Elements. OID: { tmdd dataElements (2) }
3. Data Frames. OID: { tmdd dataFrames (3) }
4. Messages. OID: { tmdd messages (4) }
5. Dialogs. OID: { tmdd dialogs (5) }

These names don't match the defined data concept types in the TMDD Standard:

the names for these object classes should be:

tmddObjectClasses
tmddDataElements,
tmddDataFrames,
tmddMessages, and
tmddDialogs

Please rename the ASN.1 OID references to be consistent with their use in the standard.

Resolution: Comment Status: Closed Disposition: Accepted

Updated the OID representation next to the data concept type as follows:

1. Object Classes. OID: { tmddObjectClasses (1) }
2. Data Elements. OID: { tmddDataElements (2) }
3. Data Frames. OID: { tmddDataFrames (3) }
4. Messages. OID: { tmddMessages (4) }
5. Dialogs. OID: { tmddDialogs (5) }

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1325	UC136	Blake Christie	TMDD v3.02 Draft 1	15	TMDD v3.02 Draft 1	3 TMDD ISO 14817 ASN.1 and XML Data Concept Definitions

Comment: 1. The title used for each data concept clause is the ISO 14817 descriptive name.

It appears that the title, in each data concept definition, is closer to the ASN.1 name than the ISO 14817 Descriptive Name.

Please either use the ISO 14817 Descriptive Name as the title, or modify this statement to reflect the use of the ASN.1 name for the title.

Resolution: Comment Status: Closed Disposition: Accepted

Updated the statement in Section 3, number 1 to, 1. The title used for each data concept clause is ASN.1 name.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1326	UC136	Blake Christie	TMDD v3.02 Draft 1	16	TMDD v3.02 Draft 1	

Comment: DESCRIPTIVE-NAME "ExternalCenter<-dlArchivedDataTrafficMonitoringMetadataRequest->OwnerCenter"

Why in v3.02 did the DESCRIPTIVE-NAME change the InterfaceDialog, from starting with the first letter being capitalized to a lower case letter?

See ISO 14817, Clause 9.2 Data concept descriptive name formats

Data: Interface Dialogue
Descriptive name format: SourceName<-InterfaceDialog->DestinationName

It seems that it was correct in TMDD v3.0. Please clarify.

Resolution: Comment Status: Closed Disposition: Accepted
This was an error and has been corrected. The InterfaceDialogue in the descriptive name has been updated so the first letter is capitalized. The first letter in the ASN-NAME and the title also have been updated so the first letter is capitalized.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1327	UC136	Blake Christie	TMDD v3.02 Draft 1	16	TMDD v3.02 Draft 1	

Comment: ASN-NAME "dlArchivedDataTrafficMonitoringMetadataRequest"

Why in v3.02 did the ASN-NAME change from starting with the first letter being capitalized to a lower case letter?

See ISO 14817, Clause B.2.6 ASN.1 name

Definition: The ASN.1 Name shall be the name of a data concept expressed as a valid "typereference" as defined in 11.2 of ISO/IEC 8824-1:1999. The ASN.1 name should be unique within the ITS/TICS community.

Description: The name of a data concept expressed in ASN.1 syntax.

NOTE Information on ASN.1 naming conventions and conversion from ITS/TICS Data Dictionary data element names to ASN.1 names can be found in Annex D.

See ISO 14817, Clause D.3 Converting ITS descriptive names to ASN.1 names, D.3.2 Use of ASN.1 syntax

The ASN.1 naming rules are as follows:

- The set of characters from which names can be formed in ASN.1 are: A-Z, a-z, hyphen, 0-9.
- Typereferences are names that must start with a capital letter.
- Identifiers are names that must start with a lower case letter.
- A name (i.e., a typereference or an identifier) cannot contain two or more contiguous hyphens, nor start or end with a hyphen. Note that ASN.1 names are case-sensitive.
- While no maximum length is placed on names by ASN.1; this International Standard limits names by way of this Annex.

It seems that it was correct in TMDD v3.0. Please clarify.

Resolution: Comment Status: Closed Disposition: Accepted
This was an error and has been corrected. The first letter in the ASN-NAME is now capitalized. The InterfaceDialogue in the descriptive name and the title also have been updated so the first letter is capitalized.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1328	UC136	Blake Christie	TMDD v3.02 Draft 1	111	TMDD v3.02 Draft 1	

Comment: DESCRIPTIVE-NAME "archivedDataProcessingDocumentationMetadataMsg:message"

ASN-NAME "archivedDataProcessingDocumentationMetadataMsg"

Why is the DESCRIPTIVE-NAME and the ASN-NAME for the message starting with the first letter being a lower case letter?

See ISO 14817, Clause 9.2 Data concept descriptive name formats

Data: Message
Descriptive Name Format: Message Term:message

See ISO 14817, Clause D.1.8 Message descriptive name format

A message descriptive name is a name that captures the essence of the purpose of the message. The structure of the message descriptive name shall be:

MessageTerm:message

The structure is identical to that of the object class descriptive name, except that it may be plural and that it shall be followed by the string literal ".message".

See above for discussion on ASN.1 names.

Please clarify.

Resolution: Comment Status: Closed Disposition: Accepted
This was an error and has been corrected. The first letter in the ASN-NAME, the message in the descriptive name, and the title also have been updated so the first letter is capitalized.
Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1329	UC136	Blake Christie	TMDD v3.02 Draft 1		TMDD v3.02 Draft 1	3.3.6.1.8.1 Contents of Device Schedule Information

Comment: An owner center shall send device schedule information to an external center.

The requirement is missing from the RTM. Note, this requirement is also missing from the NRTM in volume 1.

Please consider making this a header and not a requirement. Then it would not be required to be in the NRTM or RTM.

The following are requirements that define how the device schedule information is sent by an owner center.

Resolution: Comment Status: Closed Disposition: Accepted
Updated 3.3.6.1.8.1 text to read, "The following are requirements that define how the device schedule information is sent by an owner center."
Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1330	UC136	Blake Christie	TMDD v3.02 Draft 1		TMDD v3.02 Draft 1	3.3.9 Accept Null Values

Comment: Although referenced in the History on page v, "User Need 2.3.8 Need to Accept Null Values. becomes a generic (architectural requirement)", the requirement appears in the standard, but not the RTM.

Please delete the need (2.3.8) and create a new constraints section in volume 1 for this design requirement. By defining this as a constraint, this does not need to be referenced as a requirement in the NRTM or RTM but must show up in the design.

Resolution: Deleted User Need 2.3.8 Need to Accept Null Values and Requirement 3.3.9 Accept Null Values. Comment Status: Closed Disposition: Accepted

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1331	UC136	Blake Christie	TMDD v3.02 Draft 1	530	TMDD v3.02 Draft 1	3.3.4.7.1 Restriction (in RTM)

Comment: In Standards for Traffic Management Center to Center Communications Volume 1, Concept of Operations and Requirements, User Comment Draft, November 14, 2011, this section is referred to: 3.3.4.7.1 Restrictions

See also:

- 3.3.4.8.4.2.1 Restriction
- 3.3.5.2.1.5.2.1 Restriction
- 3.3.5.2.2.5.2.1 Restriction
- 3.3.5.3.1.5.2.1 Restriction
- 3.3.5.3.2.5.2.1 Restriction
- 3.3.5.4.1.5.2.1 Restriction
- 3.3.5.4.2.5.2.1 Restriction

Please correct for inconsistent titles between NRTM and Section 2.

Resolution: Corrected all to be Restrictions. Comment Status: Closed Disposition: Accepted

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1332	UC136	Blake Christie	TMDD v3.02 Draft 1	541	TMDD v3.02 Draft 1	3.3.6.2.3.5.2.2 Detector, 3.4.16.8 station-id

Comment: 3.3.6.2.3.5.2.2 Detector data-element Organization-resource-identifier 3.4.16.8 station-id
3.3.6.2.3.5.2.2 Detector Station data-element Organization-resource-identifier 3.4.16.8 station-id

The RTM contains a duplicate entry for requirement 3.3.6.2.3.5.2.2 (see page 541). It is defined as 3.3.6.2.3.5.2.2 Detector Station on page 88 of vol. 1, however it is referenced in the NRTM (vol. 1) as 3.3.6.2.3.5.2.2 Owner Organization

Please correct inconsistent titles and section numbers.

Resolution: The requirement title for requirements 3.3.6.2.3.5.2.2 should be Detector Station. It has been corrected in the NRTM and the RTM. Comment Status: Closed Disposition: Accepted

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1333	UC136	Blake Christie	TMDD v3.02 Draft 1	541	TMDD v3.02 Draft 1	3.3.6.2.3.5.2.5 Data Collection Start (in RTM)

Comment: In Standards for Traffic Management Center to Center Communications Volume 1, Concept of Operations and Requirements, User Comment Draft, November 14, 2011, this section is referred to: 3.3.6.2.3.5.2.5 REQ380 Data Collection Start

Please correct inconsistent titles.

Resolution: Comment Status: Closed Disposition: Accepted
 The requirement text for requirement 3.3.6.2.3.5.2.5 should be Data Collection Start. This has been corrected in the NRTM and RTM.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1334	UC136	Blake Christie	TMDD v3.02 Draft 1	563	TMDD v3.02 Draft 1	3.3.6.11.7.5.2.8 Vehicle Red Duration (in RTM)

Comment: In Standards for Traffic Management Center to Center Communications Volume 1, Concept of Operations and Requirements, User Comment Draft, November 14, 2011, this section is referred to: 3.3.6.11.7.5.2.8 Vehicle Red

Please correct inconsistent titles.

Resolution: Comment Status: Closed Disposition: Accepted
 Corrected the numbering in the RTM, from 3.3.6.11.7.5.2.8 Vehicle Red to 3.3.6.11.7.5.2.6 Vehicle Red Duration

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1335	UC136	Blake Christie	TMDD v3.02 Draft 1	15	TMDD v3.02 Draft 1	2.3.1.4 Need to Support Error Handling

Comment: See the thread below to for full assessment and Summary. The bolded texts in the thread indicate issues that need to be address by ITE.

Resolution: Comment Status: Closed Disposition: Informative
 This is really a requirement. The detailed comments are elsewhere.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1344	UC136	Blake Christie	TMDD v3.02 Draft 1		TMDD v3.02 Draft 1	Thread 1 – 2.3.1.4 Need to Support Error Handling, Step 2 Verify Requirement(s)

Comment: 3. Found section 3.3.1.4.1.2 with a different name (it was Restrictions in the NRTM and Optional Error Report Contents in section 3.3.1.4.1.2). Inconsistent Name. Please modify as appropriate.

Resolution: Comment Status: Closed Disposition: Accepted
 The NRTM was corrected to be 3.3.1.4.1.2.1 Restrictions. There is no longer a 3.3.1.4.1.2 in the NRTM.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1345	UC136	Blake Christie	TMDD v3.02 Draft 1		TMDD v3.02 Draft 1	Thread 1 – 2.3.1.4 Need to Support Error Handling, Step 2 Verify Requirement(s)

Comment: 4. Found section 3.3.1.4.1.2.1 on page 38 with the name Restrictions and in the NRTM Restrictions is numbered 3.3.1.4.1.2. Inconsistent Requirement ID. Please modify as appropriate.

Resolution: Comment Status: Closed Disposition: Accepted
The NRTM was corrected to be 3.3.1.4.1.2.1 Restrictions. There is no longer a 3.3.1.4.1.2 in the NRTM.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1346	UC136	Blake Christie	TMDD v3.02 Draft 1		TMDD v3.02 Draft 1	Thread 1 – 2.3.1.4 Need to Support Error Handling, Step 3 Verify Design(s)

Comment: 1. For requirement 3.3.1.4.1 Contents of the Error Report (s) went to RTM (Page 525) to identify the dialog that invokes the message.
a. No dialog found. Thread broken.

Resolution: Comment Status: Closed Disposition: Accepted
The Error Report is part of all generic dialogs, thus a dialog reference of Volume II, Section 2.4 has been added.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1347	UC136	Blake Christie	TMDD v3.02 Draft 1		TMDD v3.02 Draft 1	Thread 1 – 2.3.1.4 Need to Support Error Handling, Step 3 Verify Design(s)

Comment: Found tmddDataFrames 12 in Section 3.3.3.4 to be ErrorReport

Thread broken. Could not trace to "c2cDataElements informationalText(1)" or "C2C.InformationalText" in section 3.3.4.3 (ErrorReport). Therefore, no verification was possible for this data concept. How is the software developer to know how to design this data concept?

Resolution: Comment Status: Closed Disposition: Accepted
Added Section 3.6, which provides the ASN.1 representation for external references.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1348	UC136	Blake Christie	TMDD v3.02 Draft 1		TMDD v3.02 Draft 1	Thread 1 – 2.3.1.4 Need to Support Error Handling, Step 3 Verify Design(s)

Comment: 4.For requirement No. 3.3.1.4.1.1; Required Error Report Contents went to tmddDataFrames 158, OrganizationInformation Section 3.3.17.3 on page 322 as referenced in in the RTM page 525 and it referenced the following:

b.tmddDataFrames 157 (OrganizationCenterInformation page 321)
i.lrmsDataFrames geoLocation(1)

1.Thread broken. Could not trace to "lrmsDataFrames geoLocation(1)." Therefore, no verification was possible.

Resolution: Comment Status:Closed Disposition: Accepted

Added Section 3.6, which provides the ASN.1 representation for external references.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1349	UC136	Blake Christie	TMDD v3.02 Draft 1		TMDD v3.02 Draft 1	Thread 2 - Need to Provide Information on Organizations, Step 1 Verify Need

Comment: 1.Inconsistent name. Found section No. 2.3.3, with a longer name - Need to Provide Information on Organizations, Centers, and Contacts - on page 16 (traced to need section). Modify as appropriate.

Resolution: Comment Status:Closed Disposition: Accepted

Corrected NRTM.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1350	UC136	Blake Christie	TMDD v3.02 Draft 1		TMDD v3.02 Draft 1	Thread 2 - Need to Provide Information on Organizations, Step 2- Verify Req's

Comment: 21.Found section 3.3.3.5.2.4.2.6 on page 41 with same name. Cellular phone identifier of contact person as part of organization information sent. Solution dependent. Why is Nextel part of this requirement? Brands do not belong in the standard.

Resolution: Comment Status:Closed Disposition: Accepted

Changed from, "this may be an extension number or a Nextel number." to "For example, this may be an extension number or a Nextel number."

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1351	UC136	Blake Christie	TMDD v3.02 Draft 1		TMDD v3.02 Draft 1	Thread 2 - Need to Provide Information on Organizations, Step 2- Verify Req's

Comment: Found section 3.3.3.5.2.5.1 on page 42 with same name. Unique identifier of each center owned and operated by the organization as part of organization information sent. Inconsistent text – “organization information” should be “organization center information” to be consistent between title and text and other requirements and headers (i.e. 3.3.3.5.2.5.2).

Resolution: Comment Status: Closed Disposition: Accepted
Updated text from, "the unique identifier of each center owned or operated by the organization as part of the organization information sent to an external center." to "the unique identifier of each center owned or operated by the organization as part of the organization center information sent to an external center."

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1352	UC136	Blake Christie	TMDD v3.02 Draft 1		TMDD v3.02 Draft 1	Thread 2 - Need to Provide Information on Organizations, Step 3 Verify Design(s)

Comment: Thread broken. Could not trace to IrmsDataFrames geoLocation(1). This appears to be an external reference. Where is it referenced?

Resolution: Comment Status: Closed Disposition: Accepted
Added Section 3.6, which provides the ASN.1 representation for external references.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1353	UC136	Blake Christie	TMDD v3.02 Draft 1		TMDD v3.02 Draft 1	Thread 2 - Need to Provide Information on Organizations, Step 3 Verify Design(s)

Comment: 11.Verified tmddDataFrames 12 ErrorReport (Section 3.3.3.4.1 page 179) and found it references:

e.Thread broken. Could not trace to “c2cDataElements informationalText(1)” or “C2C.InformationalText” in section 3.3.4.3 (ErrorReport). Therefore, no verification was possible for this data concept.

Resolution: Comment Status: Closed Disposition: Accepted
Added Section 3.6, which provides the ASN.1 representation for external references.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1354	UC136	Blake Christie	TMDD v3.02 Draft 1		TMDD v3.02 Draft 1	Thread 2 - Need to Provide Information on Organizations, Step 3 Verify Design(s)

Comment: 14.Verified tmddDataElements 8 (Error-report-code on page 360) and found it enumerated

Design Inconsistency. Note that tmddDataFrames 156(ContactDetails) is included twice in organizationInformationRequest (tmddMessages 67). Please explain why this is included twice in the same sequence (OrganizationInformation and OrganizationCenterInformation).

Resolution: Comment Status: Closed Disposition: Rejected
One instance of ContactDetails provides information about the contact person for the organization; while the other instance of ContactDetails provides information about the contact person for the center. The contact person for an organization and a center may be the same person, but for organizations with more than one center, will generally be different.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1355	UC136	Blake Christie	TMDD v3.02 Draft 1		TMDD v3.02 Draft 1	Thread 3 – 2.3.5.2.1 Need to Share Node State

Comment: 11.Found section 3.3.5.2.2.5 on page 64 with same name. Inconsistent title and text. It is unclear why this is a requirement rather than a header.

Resolution: Comment Status: Closed Disposition: Rejected
No inconsistency found. The title and text is consistent with the structure and wording with the other requirements in the standard.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1356	UC136	Blake Christie	TMDD v3.02 Draft 1		TMDD v3.02 Draft 1	Thread 3 – 2.3.5.2.1 Need to Share Node State

Comment: 12.Thread broken. Could not find a reference to c2cMessages c2cMessageRecept (1).

Resolution: Comment Status: Closed Disposition: Accepted
Added Section 3.6, which provides the ASN.1 representation for external references.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1357	UC136	Blake Christie	TMDD v3.02 Draft 1		TMDD v3.02 Draft 1	Thread 4 – 2.3.5.3 Need to Share Link Data, Step 3 – Verify Design(s)

Comment: 1.For requirement(s) 3.3.5.3.2.1 Send Link Status Information Upon Request for the input portion of the dialog:

c.Inconsistent design. Observed that there are no ownerCenter or externalCenter object classes in the XML representation but the ASN.1 representation contained them.

Resolution: Comment Status: Closed Disposition: Accepted
Updated to include ownerCenter and externalCenter objects in the XML representation.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1358	UC136	Blake Christie	TMDD v3.02 Draft 1		TMDD v3.02 Draft 1	Thread 4 – 2.3.5.3 Need to Share Link Data, Step 3 – Verify Design(s)

Comment: 3.For requirement(s) 3.3.5.3.2.1 Send Link Status Information Upon Request for the fault portion of the dialog:

c.Thread broken. Could not trace to "c2cDataElements informationalText(1)" or "C2C.InformationalText" in section 3.3.4.3 (ErrorReport). Therefore, no verification was possible for this data concept. How is the software developer to know how to design this data concept?

Resolution: Comment Status:Closed Disposition: Accepted

Added Section 3.6, which provides the ASN.1 representation for external references.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1359	UC136	Blake Christie	TMDD v3.02 Draft 1		TMDD v3.02 Draft 1	Thread 4 – 2.3.5.3 Need to Share Link Data, Step 3 – Verify Design(s)

Comment: For requirement(s) 3.3.5.3.2.3 Subscribe to Link Status Information for the input portion of the dialog:

Inconsistent design. Observed that there are no ownerCenter or externalCenter object classes in the XML representation but the ASN.1 representation contained them.

Resolution: Comment Status:Closed Disposition: Accepted

Updated to include ownerCenter and externalCenter objects in the XML representation.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1360	UC136	Blake Christie	TMDD v3.02 Draft 1		TMDD v3.02 Draft 1	Thread 4 – 2.3.5.3 Need to Share Link Data, Step 3 – Verify Design(s)

Comment: For requirement(s) 3.3.5.3.2.3 Subscribe to Link Status Information for the input portion of the dialog:

f.Thread broken. Could not trace to "c2cMessages c2cMessageReceipt (1)". Therefore, no verification was possible for this data concept. How is the software developer to know how to design this data concept?

Resolution: Comment Status:Closed Disposition: Accepted

The references were updated.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1361	UC136	Blake Christie	TMDD v3.02 Draft 1		TMDD v3.02 Draft 1	Thread 5 – 2.3.6.1.1 Need to Share Detector Inventory, Step 2, Verify Req's

Comment: 5.Found section 3.3.6.1.1.1.3 on page 76 with same name. Optional information header as part of the request. Inconsistent format, why is this optional information header included in the NRTM and 3.3.6.1.1.2 is not?

Resolution: Comment Status:Closed Disposition: Accepted

3.3.6.1.1.1.3 is a header and has been removed from the NRTM.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1362	UC136	Blake Christie	TMDD v3.02 Draft 1		TMDD v3.02 Draft 1	Thread 5 – 2.3.6.1.1 Need to Share Detector Inventory, Step 2, Verify Req's

Comment: 13. Found section 3.3.6.1.2.1.2 on page 77 with same name. Optional information header as part of the inventory content. Inconsistent format, why is this optional information header not included and 3.3.6.1.1.1.3 was in the NRTM?

Resolution: Comment Status: Closed Disposition: Accepted
3.3.6.1.1.1.3 is a header and has been removed from the NRTM.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1363	UC136	Blake Christie	TMDD v3.02 Draft 1		TMDD v3.02 Draft 1	Thread 5 – 2.3.6.1.1 Need to Share Detector Inventory, Step 2, Verify Req's

Comment: 14. Inconsistent name. Found section 3.3.6.1.2.1.2.1 on page 77 with a different name (it was Authentication in the NRTM and Restrictions in section 3.3.6.1.2.1.2.1). Suggest it be changed to "Restrictions" in the NRTM.

Resolution: Comment Status: Closed Disposition: Accepted
Corrected.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1364	UC136	Blake Christie	TMDD v3.02 Draft 1		TMDD v3.02 Draft 1	Thread 5 – 2.3.6.1.1 Need to Share Detector Inventory, Step 2, Verify Req's

Comment: 29. Found section 3.3.6.2.1.1 on page 84 with same name. This is the dialog level requirement. Well formed. However, it is missing the performance requirement. Neither the NRTM nor the requirement includes performance requirements. Note that 3.3.6.2.1.2 does provide a performance requirement section in the NRTM. Where is the performance requirement handled?

Resolution: Comment Status: Closed Disposition: Accepted
Performance requirements have been added to the NRTM by tracing the (performance) requirements to the appropriate user needs.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1365	UC136	Blake Christie	TMDD v3.02 Draft 1		TMDD v3.02 Draft 1	Thread 5 – 2.3.6.1.1 Need to Share Detector Inventory, Step 2, Verify Req's

Comment: 30. Found section 3.3.6.2.1.2 on page 84 with same name. This is the dialog level requirement. Well formed. However, it may be missing the default performance requirement. Although the NRTM includes a performance specification area, neither the NRTM nor the requirement includes default performance requirements. Where is the default performance requirement handled? It does not show in the NRTM for this need.

Resolution: Comment Status: Closed Disposition: Accepted
Performance requirements have been added to the NRTM by tracing the (performance) requirements to the appropriate user needs.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1366	UC136	Blake Christie	TMDD v3.02 Draft 1		TMDD v3.02 Draft 1	Thread 5 – 2.3.6.1.1 Need to Share Detector Inventory, Step 2, Verify Req's

Comment: 35. Found section 3.3.6.2.1.5.2.1 on page 85 with same name. This is an optional inventory content level requirement. Well formed. However, the header (parent) section 3.3.6.2.5.2 was not included in the NRTM. Inconsistent format, why is this optional information header not included and 3.3.6.1.1.1.3 was in the NRTM?

Resolution: Comment Status: Closed Disposition: Accepted
3.3.6.1.1.1.3 is a header and has been removed from the NRTM.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1367	UC136	Blake Christie	TMDD v3.02 Draft 1		TMDD v3.02 Draft 1	Thread 5 – 2.3.6.1.1 Need to Share Detector Inventory, Step 3- Verify Design(s)

Comment: 1. For requirement(s) 3.3.5.3.2.1 Send Link Status Information Upon Request for the input portion of the dialog:

c. Inconsistent design. Observed that there are no ownerCenter or externalCenter object classes in the XML representation but the ASN.1 representation contained them.

Resolution: Comment Status: Closed Disposition: Accepted
Updated to include ownerCenter and externalCenter objects in the XML representation.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1368	UC136	Blake Christie	TMDD v3.02 Draft 1		TMDD v3.02 Draft 1	Thread 5 – 2.3.6.1.1 Need to Share Detector Inventory, Step 3- Verify Design(s)

Comment: 3. For requirement(s) 3.3.5.3.2.1 Send Link Status Information Upon Request for the fault portion of the dialog:

a. Found tmddMessages 10 in section 3.2.3.3 errorReportMessage on page 117 with the following references:

ii. Thread broken in NRTM. Note that no requirements (3.3.1.4.1, 3.3.1.4.1.1 and 3.3.1.4.1.2) were referenced to this user need in the NRTM. However, this thread is found via the dialog description in section 3.1.13.2 in Volume II.

Resolution: Comment Status: Closed Disposition: Accepted
The errorReport requirements were added to this user need in the NRTM.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1369	UC136	Blake Christie	TMDD v3.02 Draft 1		TMDD v3.02 Draft 1	Thread 5 – 2.3.6.1.1 Need to Share Detector Inventory, Step 3- Verify Design(s)

Comment: 3.For requirement(s) 3.3.5.3.2.1 Send Link Status Information Upon Request for the fault portion of the dialog:

c.Thread broken. Could not trace to "c2cDataElements informationalText(1)" or "C2C.InformationalText" in section 3.3.4.3 (ErrorReport). Therefore, no verification was possible for this data concept. How is the software developer to know how to design this data concept?

Resolution: Comment Status:Closed Disposition: Accepted

Added Section 3.6, which provides the ASN.1 representation for external references.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1370	UC136	Blake Christie	TMDD v3.02 Draft 1		TMDD v3.02 Draft 1	Thread 5 – 2.3.6.1.1 Need to Share Detector Inventory, Step 3- Verify Design(s)

Comment: 4.For requirement(s) 3.3.5.3.2.3 Subscribe to Link Status Information for the input portion of the dialog:

c.Inconsistent design. There are no ownerCenter or externalCenter object classes in the XML representation but the ASN.1 representation contained them.

Resolution: Comment Status:Closed Disposition: Accepted

Updated to include ownerCenter and externalCenter objects in the XML representation.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1371	UC136	Blake Christie	TMDD v3.02 Draft 1		TMDD v3.02 Draft 1	Thread 5 – 2.3.6.1.1 Need to Share Detector Inventory, Step 3- Verify Design(s)

Comment: 4.For requirement(s) 3.3.5.3.2.3 Subscribe to Link Status Information for the input portion of the dialog:

f.Thread broken. Could not trace to "c2cMessages c2cMessageReceipt (1)". Therefore, no verification was possible for this data concept. How is the software developer to know how to design this data concept?

Resolution: Comment Status:Closed Disposition: Accepted

The references were updated.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1372	UC136	Blake Christie	TMDD v3.02 Draft 1		TMDD v3.02 Draft 1	Thread 6 – 2.3.6.1.2 Need Updated Detector Inventory, Step 1 Verify Need

Comment: 1. Found section 2.3.6.1.2 Need Updated Detector Inventory on page 19 in user needs section but could not find it in the NRTM, Thread Broken.

Resolution: Comment Status: Closed Disposition: Accepted
Added User Need 2.3.6.1.2 Need Updated Detector Inventory to the NRTM.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1373	UC136	Blake Christie	TMDD v3.02 Draft 1		TMDD v3.02 Draft 1	Thread 6 – 2.3.6.1.2 Need Updated Detector Inventory, Step 4 Assessment Summary

Comment: This need shows up in the user needs section (page 19) but there is no traceability to it in the NRTM. Thread broken.

Resolution: Comment Status: Closed Disposition: Accepted
Added User Need 2.3.6.1.2 Need Updated Detector Inventory to the NRTM.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1374	UC136	Blake Christie	TMDD v3.02 Draft 1		TMDD v3.02 Draft 1	Thread 7 – 2.3.6.1.7 Need for Detector History, Step 2 – Verify Requirement(s)

Comment: 4. Went to Section 3.3.6.1.1.1.2.2 on page 76 (in Volume I) and found requirement with same title. Traceable to the requirement definition in the NRTM.

b. Inconsistent Reference: The requirement states: "The external center shall send the organization information (See 3.3.3.5) of the organization requesting the device information as part of the device information request." The reference to section 3.3.3.5 appears incorrect because requirement 3.3.3.5 is about sending owner center organization information but not about external center organization information. Please correct.

Resolution: Comment Status: Closed Disposition: Accepted
The requirements text in Section 3.3.3.5.x has been changed to read, "The sending center shall send..to the receiving center" instead of "The owner center shall send..to the external center."

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
	1375	UC136	Blake Christie	TMDD v3.02 Draft 1	TMDD v3.02 Draft 1	Thread 7 – 2.3.6.1.7 Need for Detector History, Step 2 – Verify Requirement(s)

Comment: 5.Went to Section 3.3.6.1.1.1.3 on page 76 (in Volume I) and found requirement with same title. Traceable to the requirement definition in the NRTM.

a.Inconsistent format, why is this optional information header included in the NRTM while other headers are not?

Resolution: Comment Status:Closed Disposition: Accepted

3.3.6.1.1.1.3 is a header and has been removed from the NRTM.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
	1376	UC136	Blake Christie	TMDD v3.02 Draft 1	TMDD v3.02 Draft 1	Thread 7 – 2.3.6.1.7 Need for Detector History, Step 2 – Verify Requirement(s)

Comment: 21.Went to Section 3.3.6.2.4.3.2.5 on page 90 (in Volume I) and found requirement with same title. Traceable to the requirement definition in the NRTM.

b.Inconsistent Title and Text. The title is "Detector Calibration Date". Whereas, "detector calibration date and time" appears in the text. Please resolve the inconsistency.

Resolution: Comment Status:Closed Disposition: Accepted

Updated the title for Section 3.3.6.2.4.3.2 to be Detector Calibration Date and Time.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
	1377	UC136	Blake Christie	TMDD v3.02 Draft 1	TMDD v3.02 Draft 1	Thread 7 – 2.3.6.1.7 Need for Detector History, Step 3- Verify Design(s)

Comment: 1.Verified 3.3.6.2.4.1, Send Detector Maintenance History Information Upon Request, that initiates a dialog:

m.Verified tmddDataFrames 12 (section 3.3.3.4) and found it references:

v.Thread broken. Could not trace to "c2cDataElements informationalText(1)" or "C2C.InformationalText" in section 3.3.3.4 (ErrorReport). Therefore, no verification was possible for this data concept.

Resolution: Comment Status:Closed Disposition: Accepted

Added Section 3.6, which provides the ASN.1 representation for external references.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:		
	1378	UC136	Blake Christie	TMDD v3.02	Draft 1	TMDD v3.02	Draft 1	Thread 8 – 2.3.6.2.1 Need to Share CCTV Device Inventory, Step 2- Verify Req's

Comment: 13. Went to the NRTM (in Volume I) and traced the need to requirement 3.3.6.1.2.1.2.1 Authentication on page 77. The link is broken because Section 3.3.6.1.2.1.2.1 in Vol 1 is not Authentication. Instead, this requirement is about "Restrictions".

Resolution: Comment Status: Closed Disposition: Accepted

Updated the NRTM so Section 3.3.6.1.2.1.2.1 is Restrictions.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:		
	1379	UC136	Blake Christie	TMDD v3.02	Draft 1	TMDD v3.02	Draft 1	Thread 8 – 2.3.6.2.1 Need to Share CCTV Device Inventory, Step 2- Verify Req's

Comment: 4. Went to Section 3.3.6.1.1.1.2.2 on page 76 (in Volume I) and found requirement with same title. Traceable to the requirement definition in the NRTM.

b. Inconsistent Reference: The requirement states: "The external center shall send the organization information (See 3.3.3.5) of the organization requesting the device information as part of the device information request." The reference to section 3.3.3.5 appears incorrect because requirement 3.3.3.5 is about sending owner center organization information but not about external center organization information. Please correct.

Resolution: Comment Status: Closed Disposition: Accepted

The requirements text in Section 3.3.3.5.x has been changed to read, "The sending center shall send..to the receiving center" instead of "The owner center shall send..to the external center."

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:		
	1380	UC136	Blake Christie	TMDD v3.02	Draft 1	TMDD v3.02	Draft 1	Thread 8 – 2.3.6.2.1 Need to Share CCTV Device Inventory, Step 2- Verify Req's

Comment: 5. Went to Section 3.3.6.1.1.1.3 on page 76 (in Volume I) and found requirement with same title. Traceable to the requirement definition in the NRTM.

a. Inconsistent format, why is this optional information header included in the NRTM while other headers are not?

Resolution: Comment Status: Closed Disposition: Accepted

3.3.6.1.1.1.3 is a header and has been removed from the NRTM.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1381	UC136	Blake Christie	TMDD v3.02 Draft 1		TMDD v3.02 Draft 1	Thread 8 – 2.3.6.2.1 Need to Share CCTV Device Inventory, Step 2- Verify Req's

Comment: 13.Went to Section 3.3.6.1.2.1.2.1 on page 77 (in Volume I) and found requirement with different title.

a.Broken Traceability: In NRTM the title of the requirement 3.3.6.1.2.1.2.1 is Authentication. Whereas, the title of requirement 3.3.6.1.2.1.2.1 in text is Restrictions.

Resolution: Comment Status:Closed Disposition: Accepted

Updated the NRTM so Section 3.3.6.1.2.1.2.1 is Restrictions.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1382	UC136	Blake Christie	TMDD v3.02 Draft 1		TMDD v3.02 Draft 1	Thread 8 – 2.3.6.2.1 Need to Share CCTV Device Inventory, Step 2- Verify Req's

Comment: 31.Went to Section 3.3.6.3.1.4 on page 91 (in Volume I) and found requirement with same title. Traceable to the requirement definition in the NRTM.

a.Inconsistent format, why is this optional information header included in the NRTM while other headers are not?

Resolution: Comment Status:Closed Disposition: Informative

This is not an optional information header.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1383	UC136	Blake Christie	TMDD v3.02 Draft 1		TMDD v3.02 Draft 1	Thread 8 – 2.3.6.2.1 Need to Share CCTV Device Inventory, Step 3- Verify Design

Comment: 1.Requirement(s) 3.3.6.3.1.1, Send CCTV Inventory Information Upon Request, is traced by the dialog in design:

f.Ambiguous Reference: Verified tmddDataFrames 5 and found it is related to CCTV control parameters (cCCTVControlDetails, section 3.3.2.1 in Volume II), that referenced NTCIP. But no specific NTCIP standard is provided. In this case, it should be NTCIP 1205. Please clarify reference.

Resolution: Comment Status:Closed Disposition: Accepted

Added Section 3.6, which provides the ASN.1 representation for external references.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1384	UC136	Blake Christie	TMDD v3.02 Draft 1		TMDD v3.02 Draft 1	Thread 8 – 2.3.6.2.1 Need to Share CCTV Device Inventory, Step 3- Verify Design

Comment: 1.Requirement(s) 3.3.6.3.1.1, Send CCTV Inventory Information Upon Request, is traced by the dialog in design:

i.Verified tmddDataFrames 12 (section 3.3.3.4) and found it references:

v.Thread broken. Could not trace to “c2cDataElements informationalText(1)” or “C2C.InformationalText” in section 3.3.4.3 (ErrorReport). Therefore, no verification was possible for this data concept. How is the software developer to know how to design this data concept?

Resolution: Comment Status:Closed Disposition: Accepted

Added Section 3.6, which provides the ASN.1 representation for external references.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1385	UC136	Blake Christie	TMDD v3.02 Draft 1		TMDD v3.02 Draft 1	Thread 8 – 2.3.6.2.1 Need to Share CCTV Device Inventory, Step 3- Verify Design

Comment: 51.Requirement(s) 3.3.6.3.1.2, Publish CCTV Inventory Information, is traced by the dialog in design:

4.Broken Thread: Verified output portion of the dialog: Could not find c2cMessages c2cMessageReceipt(1) in the RTM.

Resolution: Comment Status:Closed Disposition: Accepted

The references were updated.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1386	UC136	Blake Christie	TMDD v3.02 Draft 1		TMDD v3.02 Draft 1	Thread 9- 2.3.6.4.1 Need to Share DMS Inventory, Step 2- Verify Requirements

Comment: 13.Went to the NRTM (in Volume I) and traced the need to requirement 3.3.6.1.2.1.2.1 Authentication on page 77. The link is broken because Section 3.3.6.1.2.1.2.1 in Vol 1 is not Authentication. Instead, this requirement is title “Restrictions”.

Resolution: Comment Status:Closed Disposition: Accepted

Updated the NRTM so Section 3.3.6.1.2.1.2.1 is Restrictions.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1387	UC136	Blake Christie	TMDD v3.02 Draft 1		TMDD v3.02 Draft 1	Thread 9-2.3.6.4.1 Need to Share DMS Inventory, Step 2- Verify Requirements

Comment: 4.Went to Section 3.3.6.1.1.1.2.2 on page 76 (in Volume I) and found requirement with same title. Traceable to the requirement definition in the NRTM.

b.Inconsistent Reference: The requirement states: "The external center shall send the organization information (See 3.3.3.5) of the organization requesting the device information as part of the device information request." The reference to section 3.3.3.5 appears incorrect because requirement 3.3.3.5 is about sending owner center organization information but not about external center organization information. Please correct.

Resolution: Comment Status: Closed Disposition: Accepted
The requirements text in Section 3.3.3.5.x has been changed to read, "The sending center shall send..to the receiving center" instead of "The owner center shall send..to the external center."

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1388	UC136	Blake Christie	TMDD v3.02 Draft 1		TMDD v3.02 Draft 1	Thread 9-2.3.6.4.1 Need to Share DMS Inventory, Step 2- Verify Requirements

Comment: 5.Went to Section 3.3.6.1.1.1.3 on page 76 (in Volume I) and found header with same title traceable to the requirement definition in the NRTM.

a.Inconsistent format, why is this optional information header included in the NRTM while other headers are not?

Resolution: Comment Status: Closed Disposition: Accepted
3.3.6.1.1.1.3 is a header and has been removed from the NRTM.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1389	UC136	Blake Christie	TMDD v3.02 Draft 1		TMDD v3.02 Draft 1	Thread 9-2.3.6.4.1 Need to Share DMS Inventory, Step 2- Verify Requirements

Comment: 12.Went to Section 3.3.6.1.2.1.2.1 on page 77 (in Volume I) and found requirement with different title.

a.Broken Thread: In NRTM the title of the requirement 3.3.6.1.2.1.2.1 is Authentication. Whereas, the title of requirement 3.3.6.1.2.1.2.1 in text is Restrictions.

Resolution: Comment Status: Closed Disposition: Accepted
Updated the NRTM so Section 3.3.6.1.2.1.2.1 is Restrictions.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1390	UC136	Blake Christie	TMDD v3.02 Draft 1		TMDD v3.02 Draft 1	Thread 9- 2.3.6.4.1 Need to Share DMS Inventory, Step 2- Verify Requirements

Comment: 30.Went to Section 3.3.6.5.1.4 on page 98 (in Volume I) and found requirement with same title. Traceable to the requirement definition in the NRTM.

b.Inconsistent format, why is this optional information header included in the NRTM while other headers are not?

Resolution: Comment Status: Closed Disposition: Rejected

Section 3.3.6.5.1 is not an optional information header.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1391	UC136	Blake Christie	TMDD v3.02 Draft 1		TMDD v3.02 Draft 1	Thread 9- 2.3.6.4.1 Need to Share DMS Inventory, Step 3- Verify Design(s)

Comment: i.Verified tmddDataFrames 28 (section 3.3.5.6) and found it references:

10.Inconsistent Design: Verified lrmsDataFrames geoLocation (1) and found it to appear in 3.3.5.8, 3.3.7.15, and other locations. But the lrmsDataFrames is not referred in the design. Further searching in the RTM, the reviewer found lrms:GeoLocation. Please clarify where lrmsDataFrames is defined or referred.

Resolution: Comment Status: Closed Disposition: Accepted

Added Section 3.6.x, which provides the ASN.1 representation for external references.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1392	UC136	Blake Christie	TMDD v3.02 Draft 1		TMDD v3.02 Draft 1	Thread 9- 2.3.6.4.1 Need to Share DMS Inventory

Comment: e.Broken Thread, Orphan data elements: Could not find specific external standard reference to dmsSignCfg 3, 4, 5, 6, 8 and 9, vmsCfg 3, 4, 5, 6, etc. It appears that these data elements referenced NTCIP standards (see page 207). However, specific NTCIP reference was not provided such as NTCIP 1203 version x.x. Please provide specific NTCIP references.

Resolution: Comment Status: Closed Disposition: Accepted

The normative references, which includes which version of the reference, is provided in Volume I, Section 1.7.1. Also, added Section 3.6, which provides the ASN.1 representation for external references.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1393	UC136	Blake Christie	TMDD v3.02 Draft 1		TMDD v3.02 Draft 1	Thread 9-2.3.6.4.1 Need to Share DMS Inventory, Step 3- Verify Design(s)

Comment: g.Verified tmddDataFrames 12 (section 3.3.3.4) and found it references:

v.Thread broken. Could not trace to "c2cDataElements informationalText(1)" or "C2C.InformationalText" in section 3.3.4.3 (ErrorReport).

Resolution: Comment Status: Closed Disposition: Accepted

Added Section 3.6, which provides the ASN.1 representation for external references.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1394	UC136	Blake Christie	TMDD v3.02 Draft 1		TMDD v3.02 Draft 1	Thread 9-2.3.6.4.1 Need to Share DMS Inventory, Step 3- Verify Design(s)

Comment: Requirement(s) 3.3.6.5.1.2, Publish DMS Inventory Information, is traced by the dialog in design:

d.Broken Thread: Verified output portion of the dialog: Could not find c2cMessages c2cMessageReceipt(1) in the RTM.

Resolution: Comment Status: Closed Disposition: Accepted

The references were updated.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1395	UC136	Blake Christie	TMDD v3.02 Draft 1		TMDD v3.02 Draft 1	Thread 9-2.3.6.4.1 Need to Share DMS Inventory, Step 3- Verify Design(s)

Comment: Requirement(s) 3.3.6.5.1.3, Subscribe DMS Inventory Information, is traced by the dialog in design:

Verified output portion of the dialog: Could not find c2cMessages c2cMessageReceipt(1) in the RTM.

Resolution: Comment Status: Closed Disposition: Accepted

The references were updated.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1396	UC137	Blake Christie	TMDD v3.02 Draft 1	83-84	TMDD v3.02 Draft 1	

Comment: I found another issue with the TMDD v3.02 that I am sending to you below.

Issue type: Inconsistency between ASN.1 and XML encodings

Description: The ASN.1 and
TMDD Version 03.02 – Draft 1

Volume II: Design Content November 14, 2011

3.1.25.1.4 ASN.1 REPRESENTATION

```
dIESSInventoryUpdate ITS-INTERFACE-DIALOGUE ::= {
  DESCRIPTIVE-NAME "OwnerCenter<-dIESSInventoryUpdate->ExternalCenter"
  ASN-NAME "dIESSInventoryUpdate"
  ASN-OBJECT-IDENTIFIER { tmddDialogs 89 }
  URL "Pub.gif"
  DEFINITION "A publication dialog that allows an owner center to provide
  inventory updates to an external center on the owner center's environmental sensor stations."
  DESCRIPTIVE-NAME-CONTEXT {"Manage Traffic"}
  ARCHITECTURE-REFERENCE { "traffic information coordination",
  "environmental conditions data "
  }
  ARCHITECTURE-NAME {"U.S. National ITS Architecture"}
  ARCHITECTURE-VERSION {"6.1"}
  DATA-CONCEPT-TYPE interface-dialogue
  STANDARD "TMDD"
  REFERENCED-MESSAGES {
    { tmddMessages 32 }, -- Input
    { c2cMessages c2cMessageReceipt(1) }, -- Output
    { tmddMessages 10 } -- Fault
  }
  REFERENCED-OBJECT-CLASSES {
    { tmddObjectClasses ownerCenter(18) },
    { tmddObjectClasses externalCenter(9) }
  }
}
```

3.1.25.1.5 XML REPRESENTATION

```
<operation xmlns="http://schemas.xmlsoap.org/wsdl/" name="dIESSInventoryUpdate">
  <input message="tns:MSG_ESSInventoryUpdate"/>
  <output message="tns:MSG_ConfirmationReceipt"/>
  <fault name="errorReport" message="tns:MSG_ErrorReport"/>
</operation>
```

Note that tmddMessages 32 is defined with a different name in the XML version in section 3.2.7.1.3. These are inconsistent with each other and have been observed to be causing confusion in implementations.

3.2.7.1.2 ASN.1 REPRESENTATION

```
eSSInventoryMsg ITS-MESSAGE ::= {
  DESCRIPTIVE-NAME "eSSInventoryMsg:message"
  ASN-NAME "eSSInventoryMsg"
  ASN-OBJECT-IDENTIFIER { tmddMessages 32 }
  DEFINITION "The information content describing an owner center's environmental sensor station inventory."
  DESCRIPTIVE-NAME-CONTEXT {"Manage Traffic"}
  ARCHITECTURE-REFERENCE {
    "traffic information coordination",
    "environmental conditions data "
  }
  ARCHITECTURE-NAME {"U.S. National ITS Architecture"}
  ARCHITECTURE-VERSION {"6.1"}
  DATA-CONCEPT-TYPE message
  STANDARD "TMDD"
  META-DATA-SOURCE direct
}
```

Comments

```

    PRIORITY "routine"
    FREQUENCY-OR-MESSAGE-MODE "on demand"
    REFERENCED-DATA-FRAMES {
    { tmddDataFrames 52 }
    }
    DATA-TYPE "
    ESSInventoryMsg ::= SEQUENCE (SIZE(1..10240)) OF ESSInventory
    "
    }

```

```

3.2.7.1.3 XML REPRESENTATION
<xs:element name="eSSInventoryMsg">
<xs:complexType>
<xs:sequence maxOccurs="10240">
<xs:element name="ess-inventory-item" type="ESSInventory"/>
</xs:sequence>
</xs:complexType>
</xs:element>

```

Resolution: Comment Status: Closed Disposition: Accepted
 Expanded the XML Representation to include all the XML and WSDL fragments necessary to match the ASN.1 representation.
 Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1397	UC138	Richard Glassco	TMDD v3.03 Draft 1c		TMDD v3.03 Draft 1c	Volume II, Section 3.x

Comment: the Output message is defined in REFERENCED-MESSAGES as NTCIP2306:7.2.1.3. There are several messages defined in the section. Presumably the intended message is c2cMessageReceipt on page 27, but that should be named or referenced explicitly.

Resolution: Comment Status: Closed Disposition: Accepted
 Expanded all references to NTCIP2306 to include the appropriate message or data concept.
 Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1398	UC138	Richard Glassco	TMDD v3.03 Draft 1c		TMDD v3.03 Draft 1c	tmdd.wsd

Comment: 1. We cannot tell the version of the WSDL supplied. It should have a date and version number in the text and/or the file name.

Resolution: Comment Status: Closed Disposition: Accepted
 Added date and time stamp in addition to version number in the WSDL file.
 Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1399	UC138	Richard Glassco	TMDD v3.03 Draft 1c		TMDD v3.03 Draft 1c	TMDD Volume II, Sectin 3.x

Comment: The TMDD Version 3.3 document and the WSDL have a <documentation> element but Version 3.4 does not. The reason for omitting the <documentation> element is not evident.

Resolution: Comment Status: Closed Disposition: Accepted
 The <documentation/> element was added back in for the XML representation.
 Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
	1400	UC138	Richard Glassco	TMDD v3.03 Draft 1c	TMDD v3.03 Draft 1c	TMDD Volume II, Section 3.x

Comment: The "REFERENCED-OBJECT-CLASSES" section is the ASN.1 equivalent of the XML <documentation> element. Version 3.3 includes tmddObjectClasses 7 (which is ESS), but this object class is omitted in Version 3.4. The reason for omitting this object class is not evident.

Resolution: Comment Status: Closed Disposition: Accepted

The object-class was added back in for the XML representation.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
	1401	UC138	Richard Glassco	TMDD v3.03 Draft 1c	TMDD v3.03 Draft 1c	Volume II, Section 3.1.x

Comment: In the WSDL, "Pub" and "REQ667" appear in the <documentation> element, but these classes do not appear in either the ASN.1 or XML version of references in Version 3.3 or 3.4.

Resolution: Comment Status: Closed Disposition: Accepted

The tags were added back in for the XML representation.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
	1402	UC138	Richard Glassco	TMDD v3.03 Draft 1c	TMDD v3.03 Draft 1c	Volume II

Comment: In Version 3.3, the ESSInventoryUpdate has the ASN-OBJECT-IDENTIFIER value 88. In version 3.4 its ASN-OBJECT-IDENTIFIER value is 89. The reason for this change is not evident.

Resolution: Comment Status: Closed Disposition: Rejected

The ASN-OBJECT-IDENTIFIER is 88, so it did not change.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
	1403	UC138	Richard Glassco	TMDD v3.03 Draft 1c	TMDD v3.03 Draft 1c	Volume II

Comment: 7. In both Version 3.3 and 3.4, the Output message is defined in REFERENCED-MESSAGES as NTCIP2306:7.2.1.3. There are several messages defined in the section. Presumably the intended message is c2cMessageReceipt on page 27, but that should be named or referenced explicitly.

Resolution: Comment Status: Closed Disposition: Accepted

Expanded all references to NTCIP2306 to include the appropriate message or data concept.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
	1405	UC138	Richard Glassco	TMDD v3.03 Draft 1c	TMDD v3.03 Draft 1c	TMDD Volume II

Comment: 10. The 2306 document defines a subscription response dialog, but does not define a "fault" element. Page 25 says "Information about any errors shall be contained in the informationalText of the c2cMessageReceipt message, defined in the c2cMessageAdministration XML schema (see section 7.2.1.3 below). The word "fault" does not occur in 2306. In contrast, Version 3.4 does include a "fault" element for reporting errors.

Resolution: Comment Status: Closed Disposition: Accepted

Added a statement in TMDD Volume II, Section 2.4, Generic TMDD Dialogs, "In addition, TMDD uses the optional informationalText element defined in NTCIP 2306 (See NTCIP 2306:7.2.1.3:InformationalText), to return error messages, which are also called faults in this TMDD standard.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1406	UC138	Richard Glassco	TMDD v3.03 Draft 1c		TMDD v3.03 Draft 1c	TMDD Volume II

Comment: The 2306 document says on page 22: "The operation name shall begin with the prefix "OP_" followed by a descriptive name for the operation." In the TMDD documents, the dialogs begin with dl, not OP.

Resolution: Comment Status: Closed Disposition: Accepted

Added a sentence in Volume II, Section 2.4, "Note that NTCIP 2306 requires that the operation name, in this case the dialog, begin with the prefix "OP_" followed by a descriptive name for the operation. TMDD uses the prefix "DL_" to describe its operation."

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1407	UC138	Richard Glassco	TMDD v3.03 Draft 1c		TMDD v3.03 Draft 1c	Volume II

Comment: The XML in the Version 3.4 example is a subset of the XML in the WSDL. It leaves out the <documentation> element and the <binding> element.

Resolution: Comment Status: Closed Disposition: Accepted

Expanded the XML Representation to include all the XML and WSDL fragments necessary to match the ASN.1 representation.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1408	UC139	Blake Christie	TMDD v3.03 Draft 1i	15	TMDD v3.03 Draft 1i	2.3.1.1

Comment: Thread 1 - 2.3.1.1 Verify Connection Active, Step 1, Assessment 1 - Inconsistent logic in the parent need 2.3.1 Need for Connection Management (page 15), which states the section describes two distinct needs for connection management – verifying that a connection is alive and support for error handling; however, three distinct needs are listed.

Resolution: Comment Status: Closed Disposition: Accepted

Updated the paragraph in 2.3.1, Need for Connection Management from, "verifying that a connection is alive and support for error handling" to "verifying that a connection is alive and establishing the message patterns for exchanging information."

Deleted, "and C2C functionality is working" from paragraph 2.3.1.1, Verify Connection Active.

Added a sentence at the end of 2.3.1.2, Need to Support Request, "This message pattern is the ability of an owner center to respond with a single message response to a single message request sent from an external center."

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1409	UC139	Blake Christie	TMDD v3.03 Draft 1i	36	TMDD v3.03 Draft 1i	3.3.1.1.5.2.1

Comment: Thread 1 - 2.3.1.1 Verify Connection Active, Step 2, Assessment 8. - Found section 3.3.1.1.5.2.1 on page 36 with same name. This requirement is for providing any [emphasis added] restrictions on the dissemination of information as part of the center active information. Unclear if the intent is to restrict information (e.g., ESS data) that will be provided to an external center, or to restrict the center active information. Please see #11 below that is about restrictions on error reports, which leads me to think that the restriction pertains to the dissemination of the center active information [message]. The word "any" is a weasel word and therefore one cannot consistently test this requirement. Ambiguous requirement. Recommend revising the requirement to read: "The owner center shall provide restrictions on the dissemination of the center active information sent to an external center". The requirement goes on to state that dissemination includes relaying information to third parties and then provides valid values for these restrictions.

Resolution: Comment Status: Closed Disposition: Accepted

Updated the title of 3.3.1.1.5.2.1 from "Restrictions" to "Restrictions - Center Active".

Updated the first sentence in 3.3.1.1.5.2.1 on page 36 from, "The owner center shall provide any restrictions on the dissemination of the information as part of the center active information sent to an external center." to, "The owner center shall provide restrictions on the dissemination of the information as part of the center active information sent to an external center."

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1410	UC139	Blake Christie	TMDD v3.03 Draft 1i	37	TMDD v3.03 Draft 1i	3.3.1.4.1.2.1

Comment: Thread 1 - 2.3.1.1 Verify Connection Active, Step 2, Assessment 11. -
Found section 3.3.1.4.1.2.1 on page 37 with same name; however, this is the Same Name as Requirement 3.3.1.1.5.2.1 on page 36. Please modify as appropriate. This requirement is about any [emphasis added] restrictions on the dissemination of information as part of the error report information. See #8 above. The word "any" is a weasel word and therefore one cannot consistently test this requirement. Ambiguous requirement. Recommend revising the requirement to read: "The owner center shall provide restrictions on the dissemination of the error report information sent to an external center". The requirement goes on to state that dissemination includes relaying information to third parties and then provides valid values for these restrictions.

Resolution: Comment Status: Closed Disposition: Accepted
Updated the title of 3.3.1.4.1.2.1 from "Restrictions" to "Restrictions - Error Report" and updated the first sentence from "The owner center shall provide any restrictions on the dissemination of the information as part of the error report information sent to an external center." to "The owner center shall provide restrictions on the dissemination of the information as part of the error report information sent to an external center."

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1411	UC139	Blake Christie	TMDD v3.03 Draft 1i	269	TMDD v3.03 Draft 1i	3.3.10.1

Comment: Thread 1 - 2.3.1.1 Verify Connection Active, Step 3, Design and Assessment 1j. -
Verified tmddDataFrames 114 (dateTimeZone) section 3.3.10.1 on page 269 and it references:
i. tmddDataElements 119 (Date page 413) fulfills requirement
ii. tmddDataElements 120 (Time page 413) fulfills requirement
iii. tmddDataElements 121 (Time-offset-utc page 414)
iv. Inconsistent use of this data frame. In tmddDataFrames 158 on page 306 it references tmddDataFrames 114 for last update time; however, tmddDataFrames 114 on page 269 defines this data frame to describe local time. Please correct inconsistency.

Resolution: Comment Status: Closed Disposition: Rejected
The local time, as defined in dateTimeZone (tmddDataFrames 114) represents the date and time in the region of interest. The last-update-time, as defined in organizationInformation (tmddDataFrames 158) represents the date and time in the region of interest that the organization information was last updated.

No change was made.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1412	UC139	Blake Christie	TMDD v3.03 Draft 1i	129	TMDD v3.03 Draft 1i	3.2.3.3

Comment: Thread 1 - 2.3.1.1 Verify Connection Active, Step 3, Design and Assessment 2. -
Verified tmddMessages 10 in section 3.2.3.3 page 129 to be ErrorReportMsg (it was Fault Message on page 16). Inconsistent Name. Please modify as appropriate. Referenced the following:
a. tmddDataFrames 12

Resolution: Comment Status: Closed Disposition: Accepted
Under 3.1.3.1, dlCenterActiveVerificationRequest, the Referenced-Messages point to {tmddMessages 10 }, which is the errorReportMsg but the name is not shown in the comment. (Fault Message) is the type of message, as opposed to (Input Message) or (Output Message). Updated to add the words errorReportMsg in the comment.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1413	UC139	Blake Christie	TMDD v3.03 Draft 1i	85	TMDD v3.03 Draft 1i	

Comment: Thread 1 - 2.3.1.1 Verify Connection Active, Step 3, Design and Assessment 6b. -
Found dlCenterActiveVerificationUpdate, tmddDialogs 81 (owner center to external center publication response) on page 85 and it referenced the following:
i. tmddMessages 9 (centerActiveVerificationResponseMsg) already evaluated above.
ii. c2cMessages c2cMessageReceipt (1) (c2cMessageReceipt) traces to the C2C Standard
iii. tmddMessages 10 (Fault Message) already evaluated above. Inconsistent Name. Please modify as appropriate.

Resolution: Comment Status: Closed Disposition: Accepted
Under 3.1.22.1, dlCenterActiveVerificationUpdate, the Referenced-Messages point to {tmddMessages 10 }, which is the errorReportMsg but the name is not shown in the comment. (Fault Message) is the type of message, as opposed to (Input Message) or (Output Message). Updated to add the words errorReportMsg in the comment.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1414	UC139	Blake Christie	TMDD v3.03 Draft 1i	582	TMDD v3.03 Draft 1i	

Comment: Thread 1 - 2.3.1.1 Verify Connection Active, Step 3, Design and Assessment 7e. -
tmddMessages 10 (Fault Message) already evaluated above. Inconsistent Name. Please modify as appropriate.

Resolution: Comment Status: Closed Disposition: Accepted
Under 3.1.3.2, dlCenterActiveVerificationSubscription, the Referenced-Messages point to {tmddMessages 10 }, which is the errorReportMsg but the name is not shown in the comment. (Fault Message) is the type of message, as opposed to (Input Message) or (Output Message). Updated to add the words errorReportMsg in the comment.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1415	UC139	Blake Christie	TMDD v3.03 Draft 1i	129	TMDD v3.03 Draft 1i	3.3.2.3

Comment: Thread 1 - 2.3.1.1 Verify Connection Active, Step 3, Design and Assessment 16a. -
errorReportMsg (tmddMessages 10) section 3.2.3.3 on page 129 already evaluated above. Inconsistent Name. Please modify as appropriate.

Resolution: Comment Status: Closed Disposition: Accepted
Same as Comment ID #1414.

Under 3.1.3.2, dlCenterActiveVerificationSubscription, the Referenced-Messages point to {tmddMessages 10 }, which is the errorReportMsg but the name is not shown in the comment. (Fault Message) is the type of message, as opposed to (Input Message) or (Output Message). Updated to add the words errorReportMsg in the comment.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1416	UC139	Blake Christie	TMDD v3.03 Draft 1i	44	TMDD v3.03 Draft 1i	NRTM: User Need 2.3.3.1

Comment: Thread 2 - 2.3.3.1 Need For An Index of Events, Step 2, Assessment 20.-
Found 3.3.3.4.3.13 on page 44. Required external center to request filtered event information based upon hazardous material codes associated with an event. User Need Unfulfilled. Need 2.3.3.1 was not mapped to this requirement in the NRTM.

Resolution: Comment Status: Closed Disposition: Accepted
Added requirement 3.3.3.4.3.13 to the NRTM under User Need 2.3.3.1.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1417	UC139	Blake Christie	TMDD v3.03 Draft 1i	44	TMDD v3.03 Draft 1i	NRTM - User Need 2.3.3.1

Comment: Thread 2 - 2.3.3.1 Need For An Index of Events, Step 2, Assessment 21. - Found 3.3.3.4.3.14 on page 44. Required external center to request filtered event information based upon hazardous material placard codes associated with an event. User Need Unfulfilled. Need 2.3.3.1 was not mapped to this requirement in the NRTM.

Resolution: Comment Status: Closed Disposition: Accepted

Added requirement 3.3.3.4.3.14 to the NRTM under User Need 2.3.3.1.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1418	UC139	Blake Christie	TMDD v3.03 Draft 1i	60	TMDD v3.03 Draft 1i	3.3.3.9.5

Comment: Thread 2 - 2.3.3.1 Need For An Index of Events, Step 2, Assessment 23. - Found section 3.3.3.9.5 on page 60. Identified required event index information, including:
a.Associated URL;
b.The date and time when the event was last updated;
c.Unique identifier of the event;
d.Event update number; and
e.Event status (updated, deleted, ended).
This requirement should be a child to 3.3.3.9.4 and renumbered as 3.3.3.9.4.1

Resolution: Comment Status: Closed Disposition: Accepted

The requirement has been renumbered from 3.3.3.9.5 and renumbered as 3.3.3.9.4.1

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1419	UC139	Blake Christie	TMDD v3.03 Draft 1i	60	TMDD v3.03 Draft 1i	3.3.3.9.6

Comment: Thread 2 - 2.3.3.1 Need For An Index of Events, Step 2, Assessment 24. - Found 3.3.3.9.6 on page 60. Provided optional requirements that an owner center may include in the event index information sent to an external center. This requirement should be a child to 3.3.3.9.4 and renumbered as 3.3.3.9.4.2

Resolution: Comment Status: Closed Disposition: Accepted

The requirement has been renumbered from 3.3.3.9.6 and renumbered as 3.3.3.9.4.2

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1420	UC139	Blake Christie	TMDD v3.03 Draft 1i	60	TMDD v3.03 Draft 1i	3.3.3.9.6.1

Comment: Thread 2 - 2.3.3.1 Need For An Index of Events, Step 2, Assessment 25. - Found 3.3.3.9.6.1 on page 60. Required owner center provide the date and time of the last change to the associated file that the URL points to of the event index information. This requirement should be a child requirement and renumbered as 3.3.3.9.4.2.1

Resolution: Comment Status: Closed Disposition: Accepted

The requirement has been renumbered from 3.3.3.9.6.1 and renumbered as 3.3.3.9.4.2.1.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1421	UC139	Blake Christie	TMDD v3.03 Draft 1i	60	TMDD v3.03 Draft 1i	3.3.3.9.6.2

Comment: Thread 2 - 2.3.3.1 Need For An Index of Events, Step 2, Assessment 26. - Found 3.3.3.9.6.2 on page 60. Required the owner center provide the file type or medium that the URL reference points to as part of the URL reference information. This requirement should be a child requirement and renumbered as 3.3.3.9.4.2.2

Resolution: Comment Status: Closed Disposition: Accepted

The requirement has been renumbered from 3.3.3.9.6.2 and renumbered as 3.3.3.9.4.2.2.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1422	UC139	Blake Christie	TMDD v3.03 Draft 1i	37	TMDD v3.03 Draft 1i	3.3.1.4.1.2.1

Comment: Thread 2 - 2.3.3.1 Need For An Index of Events, Step 2, Assessment 29. - Found 3.3.1.4.1.2.1 on page 37. Allowed owner center to place restrictions of the dissemination of information as part of the error report information sent to the external center. This requirement does not have a unique name. There are several other instances with requirements having the name "Restrictions".

Resolution: Comment Status: Closed Disposition: Accepted

Updated the title of 3.3.1.4.1.2.1 from "Restrictions" to "Restrictions - Error Report".

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1423	UC139	Blake Christie	TMDD v3.03 Draft 1i	40129	TMDD v3.03 Draft 1i	3.1.8.2

Comment: Thread 2 - 2.3.3.1 Need For An Index of Events, Step 3, Design and Assessment 1b.-

b.Went to 3.1.8.2 dIEventIndexRequest on page 40.

i.Referenced Messages

1.tmddMessages 38 – eventRequestMsg on page 144

2.tmddMessages 37 – eventIndexMsg on page 144

3.tmddMessages 10 – fault message on page 129. Inconsistent message name. The note references a fault message; however the actual message is errorReportMsg.

Resolution: Comment Status: Closed Disposition: Accepted

Under 3.1.8.2, 2 dIEventIndexRequest, the Referenced-Messages point to {tmddMessages 10 }, which is the errorReportMsg but the name is not shown in the comment. (Fault Message) is the type of message, as opposed to (Input Message) or (Output Message). Updated to add the words errorReportMsg in the comment.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1424	UC139	Blake Christie	TMDD v3.03 Draft 1i	129	TMDD v3.03 Draft 1i	3.1.26.2

Comment: Thread 2 - 2.3.3.1 Need For An Index of Events, Step 3, Design and Assessment 2b.-

Went to 3.1.26.2 dIEventIndexUpdate on page 95.

i.Referenced Messages

1.tmddMessages 37 – eventIndexMsg on page 144

2.c2cMessages c2cMessageReceipt (1) – c2cMessageReceipt

3.tmddMessages10 – fault message on page 129. Inconsistent message name. The note references a fault message; however the actual message is errorReportMsg.

Resolution: Comment Status: Closed Disposition: Accepted

Under 3.1.26.2, 2 dIEventIndexUpdate, the Referenced-Messages point to {tmddMessages 10 }, which is the errorReportMsg but the name is not shown in the comment. (Fault Message) is the type of message, as opposed to (Input Message) or (Output Message). Updated to add the words errorReportMsg in the comment.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1425	UC139	Blake Christie	TMDD v3.03 Draft 1i	129	TMDD v3.03 Draft 1i	3.1.8.5

Comment: Thread 2 - 2.3.3.1 Need For An Index of Events, Step 3, Design and Assessment 3b.-

Went to 3.1.8.5 dIEventIndexSubscription on page 42.

i.Referenced Messages

1.tmddMessages 38 – eventRequestMsg on page 144

2.c2cMessages c2cMessageReceipt (1) – c2cMessageReceipt

3.tmddMessages10 – fault message on page 129. Inconsistent message name. The note references a fault message; however the actual message is errorReportMsg.

Resolution: Comment Status: Closed Disposition: Accepted

Under 3.1.8.2,5, dIEventIndexSubscription, the Referenced-Messages point to {tmddMessages 10 }, which is the errorReportMsg but the name is not shown in the comment. (Fault Message) is the type of message, as opposed to (Input Message) or (Output Message). Updated to add the words errorReportMsg in the comment.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1426	UC139	Blake Christie	TMDD v3.03 Draft 1i	80	TMDD v3.03 Draft 1i	3.3.5.1.4.1.2.1

Comment: Thread 3 - 2.3.5.3.4 Need to Control a Remote CCTV Device, Step 2, Assessment 4.-
 Found section 3.3.5.1.4.1.2.1 on page 80 with same name. Well formed. Inconsistent design logic. It is unclear how this optional requirement is different from 3.3.5.1.4.1.1 part A which says the operator authentication information is required. This requirement states the operator unique identifier is optional, is the authentication information and unique identifier different? This appears in multiple threads, please clarify how these data concepts are different.

Resolution: Comment Status: Closed Disposition: Accepted
 The username for the operator authentication information and the operator unique identifier may be different. This difference was mentioned at one of the stakeholder meetings. The operator identifier that is shown to other centers may be different than the operator username, which may remain internal to the (external) center.

To clarify, added the text, "This operator identifier is sent if the user name and the identifier of the operator are different values." to the end of the Operator Identifier requirement.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1427	UC139	Blake Christie	TMDD v3.03 Draft 1i	80	TMDD v3.03 Draft 1i	3.3.5.1.4.1.2.5

Comment: Thread 3 - 2.3.5.3.4 Need to Control a Remote CCTV Device, Step 2, Assessment 8.-
 Found section 3.3.5.1.4.1.2.5 on page 80 with same name. Ambiguous requirement. The title of the requirement seems to state the date and time must be sent but the requirement text only states the time the request expires should be sent. The design appears to contain the date and time, it is suggested that the requirement text be modified to include the date.

Resolution: Comment Status: Closed Disposition: Accepted
 Updated the text from, "The external center shall provide the time this request to control the device..." to "The external center shall provide the date and time this request to control the device..."

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1428	UC139	Blake Christie	TMDD v3.03 Draft 1i	81	TMDD v3.03 Draft 1i	3.3.5.1.4.2.1

Comment: Thread 3 - 2.3.5.3.4 Need to Control a Remote CCTV Device, Step 2, Assessment 12.-
 Found section 3.3.5.1.4.2.1 on page 81 with same name. Ambiguous requirement. It is unclear what the valid status responses (d) are with the various ',' and '-' separating text. It appears that the 'and' may be of place adding to the confusion. Please clarify this text / typo.

Resolution: Comment Status: Closed Disposition: Accepted
 Updated text from, "d.Status of the request (requested change completed, request rejected - invalid command, request rejected - insufficient privileges and request queued - not implemented, device is locked)." to "d.Status of the request (requested change completed, request rejected - invalid command, request rejected - insufficient privileges, request queued - not implemented, device is locked)."

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1429	UC139	Blake Christie	TMDD v3.03 Draft 1i		TMDD v3.03 Draft 1i	3.3.10.1

Comment: Thread 3 - 2.3.5.3.4 Need to Control a Remote CCTV Device, Step 3, Assessment 8.-
 3.3.5.1.4.1.2.5 Request Expiration Date and Time
 a.3.3.10.1 Inconsistent Design. The requirement only states time while the design specifies date, time, and time zone. Please clarify this in the requirement text.

Resolution: Comment Status: Closed Disposition: Accepted
 Updated the text from, "The external center shall provide the time this request to control the device..." to "The external center shall provide the date and time this request to control the device..."

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1430	UC139	Blake Christie	TMDD v3.03 Draft 1i		TMDD v3.03 Draft 1i	3.4.16.9

Comment: Thread 3 - 2.3.5.3.4 Need to Control a Remote CCTV Device, Step 3, Assessment 15.-
3.3.5.1.4.2.2.3 Operator Last Revised Date and Time

a.3.4.16.9 Design does not fulfill requirement. This design element does not appear to contain date and time elements. Please clarify how this is to be used or if another design element needs to be referenced.

Resolution: Comment Status: Closed Disposition: Accepted

The design element is proposed to be changed from type, "3.4.16.9, Organization-resource-name" to type, "3.3.10.1, DateTimeZone".

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1431	UC139	Blake Christie	TMDD v3.03 Draft 1i	82	TMDD v3.03 Draft 1i	3.3.5.1.5.2.2.1

Comment: Thread 4 - 2.3.5.3.5 Need to Verify Video Switch Control Status, Step 2, Assessment 5. -

Found section 3.3.5.1.5.2.2.1 on page 82 with the name. Required contents of operator authentication, which is optional. This requirement refers to another requirement (3.3.2.4.2.1) for context on authentication. In the NRTM table on page 233, the requirement name is "Authentication (ControlStatusAuth)." According to section 5.3.2 (page 187) "(ControlStatusAuth)" is a predicate and is a conditional notation (see #6 below). Redundant name. This requirement has same name as requirement 3.3.2.4.2.1 – Authentication. The parent requirement, 3.3.5.1.5.2.2 Optional Device Control Status Request Content, is not a requirement as it points the child requirements for the actual requirement statement.

Resolution: Comment Status: Closed Disposition: Accepted

The titles of duplicate requirements have been updated throughout the document. So, for example, requirement 3.3.5.1.5.2.2.1 has been changed to Authentication - Device Control Status, while 3.3.2.4.2.1 has been updated to Authentication - Organization Information.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1432	UC139	Blake Christie	TMDD v3.03 Draft 1i	81	TMDD v3.03 Draft 1i	3.3.5.1.4.2.2.1

Comment: Thread 4 - 2.3.5.3.5 Need to Verify Video Switch Control Status, Step 2, Assessment 9. -

Found section 3.3.5.1.4.2.1 on page 81 with same name. Required contents of device control response. Typographical error in item d. Suggest the following: "...request rejected - insufficient privileges, request queued - not implemented, and device is locked).

Resolution: Comment Status: Closed Disposition: Accepted

Updated text from, "d.Status of the request (requested change completed, request rejected - invalid command, request rejected - insufficient privileges and request queued - not implemented, device is locked)." to "d.Status of the request (requested change completed, request rejected - invalid command, request rejected - insufficient privileges, request queued - not implemented, device is locked)."

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1433	UC139	Blake Christie	TMDD v3.03 Draft 1i	81	TMDD v3.03 Draft 1i	3.3.5.1.4.2.2.1

Comment: Thread 4 - 2.3.5.3.5 Need to Verify Video Switch Control Status, Step 2, Assessment 10. -

Found section 3.3.5.1.4.2.2.1 on page 81 with same name. Unique identifier of operator who acknowledged control request. Same name as requirement 3.3.5.1.5.2.2.1.1 (Operator Identifier). Redundant Name.

Resolution: Comment Status: Closed Disposition: Accepted

Updated 3.3.5.1.4.2.2.1 to be Operator Identifier - Device Control Acknowledge and updated 3.3.5.1.5.2.2.1.1 to be Operator Identifier - Device Control Status.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1434	UC139	Blake Christie	TMDD v3.03 Draft 1i	37	TMDD v3.03 Draft 1i	3.3.1.4.1.2.1

Comment: Thread 4 - 2.3.5.3.5 Need to Verify Video Switch Control Status, Step 2, Assessment 17. -
Found section 3.3.1.4.1.2.1 on page 37 with same name; however, this is the Same Name as Requirement 3.3.1.1.5.2.1 on page 36. Please modify as appropriate. This requirement is about any [emphasis added] restrictions on the dissemination of information as part of the error report information. The word "any" is a weasel word and therefore one cannot consistently test this requirement. Ambiguous requirement. Recommend revising the requirement to read: "The owner center shall provide any restrictions on the dissemination of the error report information sent to an external center". The requirement goes on to state that dissemination includes relaying information to third parties and then provides valid values for these restrictions.

Resolution: Comment Status: Closed Disposition: Accepted
Updated the title of 3.3.1.4.1.2.1 from "Restrictions" to "Restrictions - Error Report" and updated the first sentence from "The owner center shall provide any restrictions on the dissemination of the information as part of the error report information sent to an external center." to "The owner center shall provide restrictions on the dissemination of the information as part of the error report information sent to an external center."

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1435	UC139	Blake Christie	TMDD v3.03 Draft 1i	306	TMDD v3.03 Draft 1i	

Comment: Thread 4 - 2.3.5.3.5 Need to Verify Video Switch Control Status, Step 3, Design and Assessment 6. -
Verified tmddDataFrames 114 (DateTimeZone page 269) and it references:
a. tmddDataElements 119 (Date page 413) fulfill requirement
b. tmddDataElements 120 (Time page 413) fulfill requirement
c. tmddDataElements 121 (Time-offset-utc page 414)
d. Inconsistent use of this data frame. In tmddDataFrames 158 on page 306 it references tmddDataFrames 114 for last update time; however, tmddDataFrames 114 on page 269 defines this data frame to describe local time. Please correct inconsistency.

Resolution: Comment Status: Closed Disposition: Rejected
The local time, as defined in dateTimeZone (tmddDataFrames 114) represents the date and time in the region of interest. The last-update-time, as defined in organizationInformation (tmddDataFrames 158) represents the date and time in the region of interest that the organization information was last updated.

No change was made.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1436	UC139	Blake Christie	TMDD v3.03 Draft 1i	129	TMDD v3.03 Draft 1i	3.2.3.3

Comment: Thread 4 - 2.3.5.3.5 Need to Verify Video Switch Control Status, Step 3, Design and Assessment 10. -
Verified tmddMessages 10 in section 3.2.3.3 page 129 to be errorReportMsg (it was Fault Message on page 16). Inconsistent Name. Please modify as appropriate. Referenced the following:
a. tmddDataFrames 12

Resolution: Comment Status: Closed Disposition: Accepted
Under 3.1.5.2, 2 dlDeviceControlStatusRequest, the Referenced-Messages point to {tmddMessages 10 }, which is the errorReportMsg but the name is not shown in the comment. (Fault Message) is the type of message, as opposed to (Input Message) or (Output Message). Updated to add the words errorReportMsg in the comment.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1437	UC139	Blake Christie	TMDD v3.03 Draft 1i	459	TMDD v3.03 Draft 1i	3.4.16.9

Comment: Thread 4 - 2.3.5.3.5 Need to Verify Video Switch Control Status, Step 3, Design and Assessment 29. -
 Went to RTM page 606 and found requirement 3.3.5.1.4.2.2.3 Operator Last Revised Date and Time with the same name and this requirement traced to:
 a.organization-resource-name (tmddDataElements 193) section 3.4.16.9 page 459. Verified that the sequence makes sense for the instance name. This data element is used to identify an organization center resource. The requirement is for date and time the operator last revised status of device control. Requirement not fulfilled.

Resolution: Comment Status: Closed Disposition: Accepted
 The design element is proposed to be changed from type, "3.4.16.9, Organization-resource-name" to type, "3.3.10.1, DateTimeZone".

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1438	UC139	Blake Christie	TMDD v3.03 Draft 1i	582	TMDD v3.03 Draft 1i	3.3.1.4.1

Comment: Thread 4 - 2.3.5.3.5 Need to Verify Video Switch Control Status, Step 3, Design and Assessment 32. -
 Went to RTM page 582 and found requirement 3.3.1.4.1 Contents of the Error Report (s) with the same name and this requirement traced to:
 a.errorReportMsg (tmddMessages 10) section 3.2.3.3 on page 129 already evaluated above. Inconsistent Name. Please modify as appropriate.

Resolution: Comment Status: Closed Disposition: Accepted
 Under 3.1.5.2, 2 dlDeviceControlStatusRequest, the Referenced-Messages point to {tmddMessages 10 }, which is the errorReportMsg but the name is not shown in the comment. (Fault Message) is the type of message, as opposed to (Input Message) or (Output Message). Updated to add the words errorReportMsg in the comment.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1439	UC139	Blake Christie	TMDD v3.03 Draft 1i	77	TMDD v3.03 Draft 1i	3.3.5.1.1.1.3.5

Comment: Thread 5- 2.3.5.5.4 Need to Share ESS Environmental Observations, Step 2, Assessment 13. -
 Found section 3.3.5.1.1.1.3.5 on page 77 with same name. Ambiguous Requirement. Please clarify what is meant by 'range' of linear reference location.

Resolution: Comment Status: Closed Disposition: Accepted
 The following change is proposed: Under deviceInformationRequestFilter data frame, linear-reference will be of a new data frame called LinkLinearReferenceRange, which consists of two data elements, linear-reference-start and linear-reference-end, both of data type link-location-linear reference (See 3.4.14.15 in Volume II).

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1440	UC139	Blake Christie	TMDD v3.03 Draft 1i		TMDD v3.03 Draft 1i	3.4.14.15

Comment: Thread 5- 2.3.5.5.4 Need to Share ESS Environmental Observations, Step 3, Assessment 13. -
 3.3.5.1.1.1.3.5 Linear Reference Filter
 a.3.4.14.15 Design does not fulfill requirement. It is unclear how this fulfills the 'range' part of the requirement. See comments on the requirement.

Resolution: Comment Status: Closed Disposition: Accepted
 The following change is proposed: Under deviceInformationRequestFilter data frame, linear-reference will be of a new data frame called LinkLinearReferenceRange, which consists of two data elements, linear-reference-start and linear-reference-end, both of data type link-location-linear reference (See 3.4.14.15 in Volume II).

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1441	UC139	Blake Christie	TMDD v3.03 Draft 1i	82	TMDD v3.03 Draft 1i	3.3.5.1.6.2.1

Comment: Thread 6 - 2.3.5.8.6 Need to Cancel Lane Control Device Control Requests, Step 2, Assessment 4.-
Found section 3.3.5.1.6.2.1 on page 82 with same name. Ambiguous requirement. It is unclear that if the unique sequence number is the original control request. Please clarify.

Resolution: Comment Status: Closed Disposition: Accepted
Updated the text from, "d.Unique sequence number generated by e external center identifying the control request within the external center." to "d.Unique sequence number generated by the requesting center identifying the control request (to be canceled) within the requesting center."

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1442	UC139	Blake Christie	TMDD v3.03 Draft 1i		TMDD v3.03 Draft 1i	3.4.16.9

Comment: Thread 6 - 2.3.5.8.6 Need to Cancel Lane Control Device Control Requests, Step 3, Assessment 10.-
3.3.5.1.4.2.2.3 Operator Last Revised Date and Time design referenced:
.3.4.16.9 operator-last-revised Design does not fulfill requirement. This design element does not appear to contain date and time elements. Please clarify how this is to be used or if another design element needs to be referenced

Resolution: Comment Status: Closed Disposition: Accepted
The design element is proposed to be changed from type, "3.4.16.9, Organization-resource-name" to type, "3.3.10.1, DateTimeZone".

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1443	UC140	Canny Quach	TMDD v3.03 - Proposed Recommended Standard		TMDD v3.03a Proposed Recommended Standard	3.4.12.5

Comment: Intersection signal control source. Can we add central-adaptive?

Resolution: Comment Status: Closed Disposition: Accepted
Added a new IntersectionSignalStatusExt data frame with a new signal-control-sourceextended data element to support a new 'central-adaptive' enumeration for signal-controlsource.

Version Comment Addressed: TMDD v3.1

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1444	UC140	Canny Quach	TMDD v3.03 - Proposed Recommended Standard		TMDD v3.03a Proposed Recommended Standard	3.4.12.7

Comment: Intersection signal timing mode. Can we add the Stand-by mode (Online but running local plan)?

Resolution: Comment Status: Closed Disposition: Accepted
Added a new IntersectionSignalStatusExt data frame with a new current-signal-timingmode-extended data element to support a new 'standby' enumeration for current-signal-timing-mode.

Version Comment Addressed: TMDD v3.1

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1445	UC140	Canny Quach	TMDD v3.03 - Proposed Recommended Standard		TMDD v3.03a Proposed Recommended Standard	3.4.12.9

Comment: Intersection turning movement angle. Should clarify whether it's clockwise or counter-clockwise. (My guess is clockwise.)

Resolution: Comment Status: Closed Disposition: Accepted
If I look at the requirement this traces to, Requirement 3.3.5.11.1.5.2.9, it does state "measured...in a clockwise direction". But you are still correct, it should be clearer. I consider this an ambiguity, so we'll have to fix this in the final.

Version Comment Addressed: TMDD v3.03d

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1446	UC141	Patrick Powell	TMDD v3.03 - Draft 3		TMDD v3.03 - Proposed Recommended Standard	

Comment: This is the first chance I got to run the latest WSDL/schema files through some of my 'Fussy WSDL Checker' tools.

Here is some raw output. Note that the tmdd.wsdl and the corresponding XSD file usually have different namespaces. This is not a problem.

However, look at:

```
"http://www.tmdd.org/303/dialogs" => {
  'xmlns:ns8' => 'schemas/tmdd.wsdl',
  'xmlns:tns' => 'schemas/tmdd.wsdl'
},
```

The same URL is assigned to different namespaces. It appears that in the <definitions> entry in the WSDL file there are two xmlns:xxx definitions.

I suggest/recommend that the xmlns:ns8 be removed as it does not appear to be used in the WSDL file. I would classify this problem as a 'typeo' or 'tool artifact' problem.

Resolution:	Comment Status: Closed	Disposition: Accepted
'xmlns:ns8' => 'schemas/tmdd.wsdl' has been removed from the tmdd.wsdl file.		
Version Comment Addressed:	TMDD v303a	

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1447	UC141	Patrick Powell	TMDD v3.03 - Draft 3		TMDD v3.03 - Proposed Recommended Standard	

Comment:

Resolution:	Comment Status: Closed	Disposition:
Version Comment Addressed:		

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1448	UC142	Walter Crear	TMDD v3.03 - Draft 3		TMDD v3.03 - Proposed Recommended Standard	

Comment: The definition of the Device-location-elevation type triggered an error. It seems that either the base type should be short instead of int or the maxinclusive value is incorrect.

Resolution:	Comment Status: Closed	Disposition: Accepted
The bindings and 2 other bindings have been added back to the TMDD.wsdl file.		
Version Comment Addressed:	TMDD v3.03a	

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1449	UC142	Walter Crear	TMDD v3.03 - Draft 3		TMDD v3.03 - Proposed Recommended Standard	

Comment: The WSDL does not properly define the DLSectionSignalTimingInventoryRequest operation. XmlSpy gives an error that Operation DLSectionSignalTimingPatternInventoryRequest is defined in the wsdl, but is not resolved in the tmddOCHttpSoapServiceBinding. In other words, the binding was not defined.

Resolution:	Comment Status: Closed	Disposition: Accepted
Version Comment Addressed:	TMDD v3.03a	

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1450	UC143	TMDD Steering Committee	TMDD v3.03 - Proposed Recommended Standard		TMDD v3.03a Proposed Recommended Standard	

Comment: During a TMDD Steering Committee teleconference, there was a discussion of extensions - - "Nillable"/Null value vs. "Other" in the case of mandatory data that is to be extended – It was decided that "other" would be used and that the message must then include the appropriate additional extension data element per the standard.

Resolution: Comment Status: Closed Disposition: Accepted
 The enumeration value "other" was added to all mandatory data elements that have enumerated values to support extended enumerations.

Version Comment Addressed: TMDD v3.03a

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1451	UC144	Walter Crear	TMDD v3.03b - Recommended Standard		TMDD v3.03c Recommended Standard	

Comment: 1The TMDD does not provide an entry for verification of the publication frequency. How can this be verified?

Resolution: Comment Status: Closed Disposition: Accepted
 For Requirement ID 3.3.1.3.1, Support Periodic Updates (Subscriptions), added under Other Requirements in the Needs to Requirements Matrix, "The owner center shall support periodic updates from once per ____ (default = 300 seconds) to once per ____ (default = 31,536,000 seconds)."

Also, for event-driven publication messages, the publication frequency is defined in Section 3.4.1. So, in the NRTM, added a sentence to refer to Section 3.4.1 for each publication requirement. For example, under Other Requirements, for Requirement ID 3.3.2.2, Publish Organization Information, added, "See Section 3.4.1." to the end of, "The owner center shall begin sending the updated response message within ____ (100 ms – 24 hours; Default = 15 minutes) after the information is updated in the owner center."

Version Comment Addressed: TMDD v3.03c

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1452	UC144	Walter Crear	TMDD v3.03b - Recommended Standard		TMDD v3.03c Recommended Standard	

Comment: What performance standard is to be used to verify the delay latency requirements?

Resolution: Comment Status: Closed Disposition: Accepted
 The latency requirement is defined in Section 3.4.2. However, the allowable or desired latency requirement will differ for each dialog. For example, the allowable latency for a request for an owner center's dynamic message sign inventory will be different than a request for an owner center's traffic signal status information.

So, in the NRTM, added a sentence to refer to Section 3.4.2 to each latency requirement. For example, under Other Requirements, for Requirement ID 3.3.2.1, Send Organization Information Upon Request, added, "See Section 3.4.2." to the end of, "The owner center shall respond within ____ (100 ms – 1 hour; Default = 1 minute) after receiving the request."

Version Comment Addressed: TMDD v3.03c

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1453	UC144	Walter Crear	TMDD v3.03b - Recommended Standard		TMDD v3.03c Recommended Standard	

Comment: Should the NRTM include request and response message requirements for needs (such as 2.3.5.4.2) that are only traced to subscription and publication dialogs?

Resolution: Comment Status: Closed Disposition: Accepted
 For user needs that only trace to subscription and publication dialogs (and not a request-response dialog), added the request message and response message requirements for those user needs. In previous version of the NRTM, these user needs only traced to two requirements, a publish requirement and a subscription requirement.

Version Comment Addressed: TMDD v3.03c

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1454	UC144	Walter Crear	TMDD v3.03b - Recommended Standard		TMDD v3.03c Recommended Standard	

Comment: What is the official interpretation of an update? How is the need for updates addressed by requirements and design content?

Resolution: Comment Status: Closed Disposition: Informative

An update is when the same message is transmitted again (meaning not the first time) from an owner center to an external center, regardless of whether the data content has changed or not. Either the user need or the requirement should dictate the conditions on which an "update" is expected. For the user needs that follow the pattern, Need Updated Device Inventory, the user need states that it is without operator intervention, indicating that the same message is transmitted again without a request message from an operator.

For other user needs, "updates" are associated with sharing information, and not control (of a device for example). Those user needs do not define the conditions on when an update is transmitted from an owner center to an external center – the requirements will do that. There are three types of requirements related to updates – Send Message Upon Request, Publish Message, and Subscribe to Message. These requirements are defined in Volume I, Clause 3.3.1.2 and 3.3.1.3 of the Standard.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1455	UC144	Walter Crear	TMDD v3.03b - Recommended Standard		TMDD v3.03c Recommended Standard	

Comment: Requirement 3.3.5.14.2.2.2 Operator Lock Identifier is Optional. If selected for a project does the operator-lock-id element have to show up for every instance of the message? What if the operator has not locked it? The field has a min length of 1.

Resolution: Comment Status: Closed Disposition: Informative

If a requirement is selected, then the implementation must support the data concept the requirement trace to, in this case the data element operator-lock-id. This means the center must be able to transmit or receive the data concept (depending on if it's the owner center or external center), and "use" the data concept in the manner defined by the TMDD Standard.

However, if the data concept is defined as OPTIONAL (ASN.1) or as minOccurs="0" (XML Schema), the external center is NOT required to transmit that data concept in every instance of the message – it is only required to be able to transmit that data concept in the message.

Version Comment Addressed: TMDD v3.03c

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1456	UC144	Walter Crear	TMDD v3.03b - Recommended Standard		TMDD v3.03c Recommended Standard	

Comment: The dialog related to TMDD Need 2.3.5.9.6 does not have a response time requirement specified. (3.3.5.1.6.1)

Resolution: Comment Status: Closed Disposition: Accepted

This was an error and the appropriate text will be added.

Version Comment Addressed: TMDD v3.03c

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1457	UC144	Walter Crear	TMDD v3.03b - Recommended Standard		TMDD v3.03c Recommended Standard	

Comment: The TMDD seems to use "set to" requirements to indicate that elements should be set to specific values. However this does not seem to apply in need 2.3.5.9.6 as it relates to the Ramp Meter Value.

Resolution: Comment Status: Closed Disposition: Informative

After a clarification from Walter Crear, as I understand it, the question is why is the device type (e.g., Ramp Meter) and device information type (e.g., device data) not transmitted in the generic device control request and response messages. Each control request message consists of a unique device identifier and a unique sequence number generated by the requesting center. It is assumed and reasonable, that the external center, through a previously received inventory message from the owner center, knows what type of device is associated with that unique device identifier before sending a control request message to the owner center.

Version Comment Addressed: TMDD v3.03a

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1458	UC144	Walter Crear	TMDD v3.03b - Recommended Standard		TMDD v3.03c Recommended Standard	

Comment: For need (108) Section Pattern 1, why doesn't 3.3.5.1.1.1.3.6 show up as an option. Also why did you keep Pattern Filters as an option?

Resolution: Comment Status: Closed Disposition: Accepted
After a clarification from Walter Crear, as I understand it, the first question is about User Need 2.3.5.10.19, Need to Share Section Timing Patterns, and why does the requirement, 3.3.5.1.1.1.3.6 Section Identifier Filter, not appear for this user need. This is an oversight. Originally, the device-id was a mandatory element, so for this user need, the section identifier is the device-id - sections when not associated with a signalized intersection, are treated as another device in TMDD. The device-id is now optional, so for User Need 2.3.5.10.19, Requirement 3.3.5.1.1.1.3.6, Section Identifier Filter will be added to the NRTM. Requirement 3.3.5.1.1.1.3.7, Pattern Identifier Filter is redundant with 3.3.5.11.15.4.2.1, Section Timing Pattern Identifier, which is an oversight. So, requirement 3.3.5.11.15.4.2.1, Section Timing Pattern Identifier is proposed to be removed from the TMDD Standard and the NRTM.
Version Comment Addressed: TMDD v3.03c

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1459	UC145	Walter Crear	TMDD v3.03c		NRTM TMDD v3.03c	3.3.3.7.3.7 - Event Class

Comment: The requirement highlighted below should have the same EventIndicator predicate as the others shown. Also, the schema only allows one of these items to be used at a time, which doesn't come across here.

In the NRTM for UN 2.3.6.1.7, Need for Event Data, requirement IDs 3.3.3.7.3.x have Conformance EventIndicator:O.4(1..*) and a Support value of Yes / No / NA; except of 3.3.3.7.3.7 which has Conformance O and Support of Yes / No.

Resolution: Comment Status: Closed Disposition: Accepted
Agree this is an error. Will update UN 2.3.6.1.7, Need for Event Data, to Conformance EventIndicator:O.4(1..*) and a Support value of Yes / No / NA.

The schema may allow only one item to be used at a time, but the NRTM is only about support for the item.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1460	UC146	Walter Crear	TMDD v3.03c		NRTM TMDD v3.03c	2.3.1.3 - Need to Support Subscriptions

Comment: According to the NRTM in TMDDv3.03c the selection of needs and requirements illustrated below is a valid selection. However, I don't think it makes sense to make the selection of the "Message Transmission Time - Publication Updates" mandatory if only the "Support Event-Driven Updates" requirement is selected.

For UN 2.3.1.3 Need to Support Subscriptions; Requirement ID 3.4.1 Message Transmission Times - Publication Updates, the conformance is Subscription:M and Support is Yes / NA. The predicate actually is for requirement ID 3.3.1.3.1 Support Periodic Updates OR requirement ID 3.3.1.3.2 Support Event-driven Updates.

Resolution: Comment Status: Closed Disposition: Accepted
Correct Requirement ID 3.4.1 Message Transmission Times - Publication Updates, so conformance is M and Support is Yes.
Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1461	UC147	Israel Lopez	TMDD v3.03c		TMDD v3.03c	

Comment: CCTV Camera Suppression Flag – There is no means to relay through TMDD the request to suppress a video feed due to an incident. This is critical where police and fire are viewing the video feeds but the public feeds needs to be disabled. From CSS, we have a web service that notifies our FLIR transcoder (internet video distribution system) that streaming video or still image needs to be suppressed. As part of the transcoding service, an alternate image is displayed in lieu of the original source video.

Resolution: Comment Status: Closed Disposition: Rejected

There is an optional data frame called restrictions that is intended to transmit any restrictions on forwarding to third parties any data that is provided by a center. This can include video images. The valid values aer": Unrestricted, Not to Public, Restricted to Law Enforcement, or Restricted to Recipient Organization Only. The data frame for the cctv status message can be found at:

[cctvStatusMsg//device-status-header//restrictions/organization-information-forwarding-restrictions](#)

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1462	UC147	Israel Lopez	TMDD v3.03c		TMDD v3.03c	

Comment: HAR message severity – There is no field that provides a severity level for a HAR message (essentially a talking event). This will allow HAR messages to be sorted based on the severity of an incident (highest playing first). I might be wrong about his, but there is extensive information about what jurisdiction will have priority when sending or processing a request.

This primarily is of importance if the HAR system has to filter messages to achieve a target maximum duration for all messages. In that case it would need some hint to allow it to select the more important content. My suggestion would be a simple 1 to 10 scale (or similar), with 1 being lowest, and 10 highest. The controlling center would determine which message sources and importance levels it would select.

Resolution: Comment Status: Closed Disposition: Accepted

Added a new HARMessageInventoryExt data frame with:

- a har-priority data element to support a new optional requirement, HAR Message Default Priority, to define the default priority for a HAR message.

Version Comment Addressed: TMDD v3.1

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1463	UC147	Israel Lopez	TMDD v3.03c		TMDD v3.03c	

Comment: HAR Message Duration – HAR message duration is not addressed in the standard. If RF coverage for HAR averages 10 miles (5 mile radius) then the duration of HAR message should not exceed the time it takes to travel through the HAR coverage area. At 60 MPH it takes 10 minutes to cover the 10 miles. Control of the types of messages and lengths becomes critical.

Resolution: Comment Status: Closed Disposition: Accepted

Added a new HARStatusExt data frame with:

- a device-plan-duration data element to support a new optional requirement, Current Message Duration - HAR, to define the duration a HAR message is to be broadcasted;
- a har-current-message-extended data element a new optional requirement, Extended Message Length - HAR, to extend the maximum length of a HAR message supported; and
- to support the HAR status information for up to 8 beacons.

Version Comment Addressed: TMDD v3.1

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1464	UC148	Israel Lopez	TMDD v3.03c		TMDD v3.03c	

Comment: We also need to address traffic count devices that classifies vehicles by axles versus the size of vehicles. To address those issues we had to create a second version of Detector messages just for traffic count devices with 15 bins. The existing TMDD messages allows for only 5 bins. We have a lot of commercial traffic on the I-80 corridor.

Vehicle Classification Types: http://www.fhwa.dot.gov/policyinformation/tmguidetmg_2013/images/fhwa.jpg

Resolution: Comment Status: Closed Disposition: Accepted
Added a new DetectorDataDetailExt data frame to support new optional requirements to provide the number of vehicles detected for a vehicle class as defined by FHWA 13-category classification.

Version Comment Addressed: TMDD v3.1

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1465	UC148	Israel Lopez	TMDD v3.03c		TMDD v3.03c	

Comment: HAR messages are identified in TMDD, but not in NTCIP. Shouldn't we do something about this?

Resolution: Comment Status: Closed Disposition: Rejected
Not applicable to TMDD.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1466	UC148	Israel Lopez	TMDD v3.03c		TMDD v3.03c	

Comment: Under CCTV cameras, the standard does not deal with multiple camera addresses for the same camera in various formats. We had to create a separate instance for every possible permutation.

1. Source IP in multicast / Source IP (unicast) (For distribution on internal ITS network)
2. Distribution Point – Source Transcoded from original format to the Public – Windows media Video (WMV)
3. Distribution Point – Source Transcoded from original format to the Public – Still image (JPEG)
4. Distribution point – Source distributed using original format and size to the Public using a form of port forwarding – MPEG4
5. Distribution Point – Source Transcoded from original format to the Public – Alternate format other than WMV #2 (Example: H.264)(Near Future)
6. Distribution Point – Source Transcoded from original format to the Public – Alternate format other than WMV #3 (Example: Motion JPEG)(Future)

Resolution: Comment Status: Closed Disposition: Accepted
Added a new DeviceInventoryHeaderExt data frame to support multiple URL references.

Version Comment Addressed: TMDD v3.1

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1467	UC148	Israel Lopez	TMDD v3.03c	147	TMDD v3.03c	3.2.7.3 - eSSObservationReportMsg

Comment: For RWIS, the RWIS Observation report uses Octet Encoding Rules (OER) for reporting the information as a string. This should be revisited and possibly removed as part of the Observation Report. As it stands anyone attempting to pull the information has to use an decoder to translate the information. This makes it difficult for third parties to use. We are going to create a second instance of the RWIS messages for reporting the information in a human readable format.

Resolution: Comment Status: Open Disposition: Future

OER encoding is used within the transportation systems industry, but it is very uncommon outside the ITS field, and there are no readily available tools. The RWIS reports are based on NTCIP 1204 v03. NTCIP 1204 v04 is currently under development, and it proposes to no longer use OER encoding. Thus, we propose to defer this to the next maintenance update until NTCIP 1204 v04 is released.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1468	UC147	Israel Lopez	TMDD v3.03c		TMDD v3.03c	

Comment: For HAR, I would also like to suggest they add a specific message attribute to indicate if the beacon should be activated. This also becomes more critical in cases where the controlling system is providing filtering. As-is, the assumption is the beacon is simply a co-located DMS, but if the entity providing the message treats it this way and their message is then filtered, the DMS could be activated but the triggering content not played. There are other issues that can arise, that suggest the activation status should be closely tied to the message content.

Resolution: Comment Status: Closed Disposition: Accepted

Added a new HARControlRequestExt data frame to support enabling/disabling up to 8 beacons per request for a HAR.

Version Comment Addressed: TMDD v3.1

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1469	UC147	Israel Lopez	TMDD v3.03c		TMDD v3.03c	

Comment: A second item was the length of the HAR message content. The standard currently allows only 1024 bytes of text. Some of our group suggested that based on their experience messages regularly exceeded this limit. I would suggest the limit be raised to 8000+ bytes per message.

Resolution: Comment Status: Closed Disposition: Accepted

Added a new HARMessageInventoryExt data frame with a har-message-extended data element to support a new optional requirement, HAR Extended Message Length, to extend the maximum length of the HAR message supported. Added a new HARStatusExt data frame with a har-current-message-extended data element a new optional requirement, Extended Message Length - HAR, to extend the maximum length of a HAR message supported.

Version Comment Addressed: TMDD v3.1

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1470	UC147	Israel Lopez	TMDD v3.03c		TMDD v3.03c	

Comment: And on a related note, in our groups discussion on this topic there was some confusion in the interpretation of the HAR standard elements relating to the intent to provide the content in the device status - specifically, if each message should be an individual status message block or if the accumulated content should be combined into a single block. It might be good to clarify the intent in the standard. Note that the change from the previous comment is even more critical if the intent was to combine the messages.

Resolution: Comment Status: Closed Disposition: Accepted

The original intent was that the accumulated messages would be combined into a single message. This was discussed during the development of TMDD v3.00. The TMDD Steering Committee decided that management of individual messages that could be combined into a single message was too complex. Added language in TMDD Volume I to describe the intent of the current message content in the HAR status message.

Version Comment Addressed: TMDD v3.1

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1472	UC149	Israel Lopez	TMDD v3.03c		TMDD v3.03c	

Comment: <The below comment suggests an approach to rectifying an issue where TMDD has no requirement to control or obtain the status of a beacon on a HAR. However, DMS requirements to contain such a set of requirements>

The purpose of the document is to identify the requirements needed to implement beacons control for Highway Advisory Radio. The document is used as means to identify how the messages may change for status, inventory, and control request messages. In order to maintain conformity, the following sections will need to be reviewed and added to the HAR inventory, status, and control messages in a controlled and responsible way.

Issues to Address:

- 1.Should this apply to the NDEX? Is it sufficient to just report on the beacons?
- 2.This will apply to the C2C interface (KHA CSS (FMS) <> 511)

Though the version of TMDD 3.01 does not support beacon control for HAR, as an organization NDOT wants to maintain the integrity of the standard by following the standard for DMS signs.

Resource: <http://www.ite.org/standards/tmdd/3.01/TMDDv3.01-Vol1-draft06.pdf>

3.3.6.5.1.5 Contents of the DMS Inventory Information

3.3.6.5.1.5.2.8 DMS Beacon Type (Page 98)

The owner center shall provide the beacon type that the DMS supports as part of the DMS inventory information for each DMS. Supported values shall include none, one beacon, two beacon sync flash, two beacon opposed flash, four beacon sync flash, four beacon alternate row flash, four beacon alternate column flash, four beacon alternate diagonal flash, four beacon no sync, one beacon strobe, two beacon strobe, four beacon strobe and other.

3.3.6.5.2 Share DMS Status Information

3.3.6.5.2.5.2.4 Message Beacon (Page 100)

The owner center shall indicate if the beacon is enabled or disabled for the message currently displayed on the DMS device as part of the DMS status information for each DMS.

3.3.6.5.3 Control Requests for Remote DMS Devices

3.3.6.5.3.2.2.1 Beacon Control (Page 101)

The external center shall indicate if the beacon is to be enabled or disabled as part of the DMS control request

3.3.6.5.7 Share DMS Message Table

3.3.6.5.7.5.1 Required DMS Message Table Inventory Information Content (page 103)

The DMS message table inventory information sent from an owner center to an external center shall include:

- a. Owner organization information (See 3.3.3.5);
- b. Unique identifier of the device;
- c. Message memory type;
- d. Message identifier (number) for each message;
- e. Message in MULTI language for each message;
- f. Message owner for each message;
- g. If the message beacon is enabled or disabled for this message;
- h. Message run-time priority for each message; and
- i. Message status (Not used, modifying, validating, valid, error, modifyReq, validateReq and notUsedReq) for each message

3.3.6.8.1 Share HAR Inventory Information

3.3.6.8.1.5.1 Required HAR Inventory Content (Page 121)

The HAR inventory information sent from an owner center to an external center shall include:

- a. Generic device inventory header information (See Section 3.3.6.1.2.1); and
- b. Device beacon availability (beacon available, no beacon, unknown).

3.3.6.8.2 Share HAR Status Information 3.3.6.8.2.5.2.1 Beacon Status (Page 122)

The owner center shall provide the beacon status on the HAR device as part of the HAR status information for each HAR. Supported values shall include beacon on and beacon off.

Resolution:	Comment Status:Closed	Disposition: Accepted
Added a new HARControlRequestExt data frame to support enabling/disabling up to 8 beacons per request for a HAR. Added a new HARInventoryExt data frame to support HARs with up to 8 beacons. Added a new HARStatusExt data frame to support the HAR status information for up to 8 beacons.		
Version Comment Addressed:	TMDD v3.1	

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1473	UC150	Garrett Moore	TMDD v3.03c		TMDD v3.03c Recommended Standard	

Comment: Provide plain English summary of major changes.

Resolution: Comment Status: Closed Disposition: Accepted
Inserted the following as part of an errata dated July 16, 2014.

The following is a summary of the major changes to TMDD v3.03 from TMDD v3.02.

- Revised the conformance statement, which defines how an implementation may claim conformance to the standard.
- Updated the mapping of TMDD to the most recent version of the U.S. National ITS Architecture at the time of publication (National ITS Architecture Version 7.0).
- Reformatted the Needs To Requirements Traceability Matrix (NRTM) for improved usability.
- Corrected ambiguities and errors that were found in TMDD v3.02.
- Added requirements based on comments received and to remove ambiguities.
- Expanded the representation of the design content to more fully define dialogs and external references.
- Added enumerations to several data elements to improve support for extensions.

The following is a summary of the major changes to TMDD v3.02 from TMDD v3.01.

- Added support for Hazmat-Incident related information. User needs were updated (See Section 2.3.4.2), and requirements and design elements for hazmat-incident information were added.

The following is a summary of the major changes to TMDD v3.01 from TMDD v3.00.

- Updated the mapping of TMDD to the most recent version of the U.S. National ITS Architecture at the time of publication (National ITS Architecture Version 6.1).
- Corrected ambiguities and errors that were found in TMDD v3.00.
- Reclassified several user needs as requirements.
- Added authentication as an optional data frame to all request messages, and added Restrictions as an optional data frame to all response messages.
- Added the enumeration, no valid data available, to the Error Report message.
- Corrected the data types in the normative NTCIP-References.xsd.
- Changed how the errorReportMsg is handled in the tmdd.wsdl file to be consistent with industry tools.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1474	UC151	Walter Crear	TMDD v3.03c		TMDD v3.03c	

Comment: As part of our NDOT work, we've noted that there isn't a way (at least with TMDD v3.01 and probably 3.03c) for a center to publish a font table to another center. This may be because there is no operational concept defined that required it, but wanted to make sure that you are aware.

Resolution: Comment Status: Closed Disposition: Future

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1475	UC152	Israel Lopez	TMDD v3.03c		TMDD v3.03c	

Comment: provide metadata for all devices and not just detectors. The metadata would consist of "when the device was last serviced, location of the controller, year installed, year of device manufacture, etc.

Resolution: Comment Status: Open Disposition: Future

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1476	UC153	Israel Lopez	TMDD v3.03c		TMDD v3.03c	

Comment: For HAR, I would also like to suggest they add a specific message attribute to indicate if the beacon should be activated. This also becomes more critical in cases where the controlling system is providing filtering. As-is, the assumption is the beacon is simply a co-located DMS, but if the entity providing the message treats it this way and their message is then filtered, the DMS could be activated but the triggering content not played. There are other issues that can arise, that suggest the activation status should be closely tied to the message content.

A second item was the length of the HAR message content. The standard currently allows only 1024 bytes of text. Some of our group suggested that based on their experience messages regularly exceeded this limit. I would suggest the limit be raised to 8000+ bytes per message.

And on a related note, in our groups discussion on this topic there was some confusion in the interpretation of the HAR standard elements relating to the intent to provide the content in the device status - specifically, if each message should be an individual status message block or if the accumulated content should be combined into a single block. It might be good to clarify the intent in the standard. Note that the change from the previous comment is even more critical if the intent was to combine the messages.

Resolution: Comment Status: Closed Disposition: No Longer Applica

Note: This comment is redundant with comment IDs 1468, 1469, and 1470.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1477	UC154	Nisat Ahmed	TMDD v3.03c		TMDD v3.03c	

Comment: A lightweight flavor of the TMDD and making the management of the standard open might make it more appealing to third-party developers.

Resolution: Comment Status: Closed Disposition: Informative

The plan is to consider a new maintenance update for TMDD every 9 months. This should address the original concern which was it is difficult to request timely changes to TMDD.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1478	UC155	Maxwell Bunshaft	TMDD v3.03c		TMDD v3.03c	

Comment: Time Range

Count, Occupancy, and Speed data is always relative to a specific time period which the data is calculated.

We add the ability for the request to specify the start of calculation time and length of data window (in seconds) for each DIDetectorDataRequest.

We have implement the following XSD:

```
<xs:complexType name="AnchoredTimeRange">
  <xs:annotation>
    <xs:documentation>
      Specifies a time range where the start is anchored by a specified time
      and the range is specified by a period in seconds. Added by SensysNetworks.
    </xs:documentation>
  </xs:annotation>
  <xs:sequence>
    <xs:element name="start-time" type="DateTimeZone" minOccurs="1" maxOccurs="1" />
    <xs:element name="period-seconds" type="xs:int" minOccurs="1" maxOccurs="1" />
  </xs:sequence>
</xs:complexType>
```

And reference to the new data type in DeviceInformationRequestFilter as follows:

```
<xs:any namespace="##other" processContents="lax" minOccurs="0"/>
<xs:element name="time-range" type="AnchoredTimeRange" minOccurs="0" maxOccurs="1" />
```

Resolution:	Comment Status: Closed	Disposition: Accepted
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Added a new DeviceInformationRequestFilterExt data frame with a new time-range data frame to support a new optional requirement, Time Range Filter, to define a valid time period for device information requests, such as for detector data.

Version Comment Addressed: TMDD v3.1

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1479	UC155	Maxwell Bunshaft	TMDD v3.03c		TMDD v3.03c	

Comment: Route Inventory

We return a sequence of GeoLocation points which describes the route path suitable for map display to DIRouteInventoryRequest.

We have implemented the following new datatype:

```
<xs:complexType name="PolyLine">
  <xs:annotation>
    <xs:documentation>
      Describes a polyline using lat/lon geo coordinates for display rendering purposes
    </xs:documentation>
  </xs:annotation>
  <xs:sequence>
    <xs:element name="point" type="lrms:GeoLocation" minOccurs="0" maxOccurs="1024"/>
  </xs:sequence>
</xs:complexType>
```

We have added the following elements to RouteInventoryList:

```
<xs:any namespace="##other" processContents="lax" minOccurs="0"/>
<xs:element name="map-display-polyline" type="PolyLine" minOccurs="0" maxOccurs="1"/>
```

Resolution:	Comment Status: Open	Disposition: Future
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Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1480	UC155	Maxwell Bunshaft	TMDD v3.03c		TMDD v3.03c	

Comment: Route Status

We return additional statistics beyond what TMDD specifies. The statistical data expands upon travel time statistics returned in response to a DIRouteStatusRequest.

We have added the following elements to RouteStatusList:

```
<xs:any namespace="##other" processContents="lax" minOccurs="0"/>
<xs:element name="travel-time-minimum" type="Link-travel-time" minOccurs="0" maxOccurs="1" />
<xs:element name="travel-time-maximum" type="Link-travel-time" minOccurs="0" maxOccurs="1" />
<xs:element name="travel-time-80th-percentile" type="Link-travel-time" minOccurs="0" maxOccurs="1" />
<xs:element name="travel-time-90th-percentile" type="Link-travel-time" minOccurs="0" maxOccurs="1" />
<xs:element name="vehicles-in-segment" type="xs:int" minOccurs="0" maxOccurs="1" />
<xs:element name="upstreamCount" type="xs:int" minOccurs="0" maxOccurs="1" />
<xs:element name="upstreamOccupancy" type="xs:float" minOccurs="0" maxOccurs="1" />
<xs:element name="downstreamCount" type="xs:int" minOccurs="0" maxOccurs="1" />

<xs:element name="downstreamOccupancy" type="xs:float" minOccurs="0" maxOccurs="1" />
```

Resolution: Comment Status: Open Disposition: Future
Need to request information on additional statistics. Corrected the built-in mechanism for XML extensibility mechanism that is contained in the content of each TMDD data frame. The prior `<xs:any namespace="##other" processContents="lax" minOccurs="0"/>` at the end of each data frame in TMDD has been updated to `<xs:any namespace="##other" processContents="lax" minOccurs="0" maxOccurs="unbounded"/>`. This change allows TMDD version update extensions and project-specific extensions.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1481	UC156	Manny Insignares	TMDD v3.03c		TMDD v3.03c	

Comment: From Tom Saul:

How would the system convey a HAR status if there is no message being played (empty message) if the description can't be empty?

The obvious options are

- 1) Dummy value ("No messages")
- 2) Change that element to optional and omit if no message active
- 3) Change definition to allow an empty element

With the support of nillable values, there are several data elements where the string length is from SIZE(1..xx). The minimum length size of 1 prevents the use of nillable information. For example, if a Highway Advisory Radio is not broadcasting a message, the message data element is null, but the minimum size length forces an implementation to enter something.

Suggest that where applicable, the minimum string length be shortened to 0.

Resolution: Comment Status: Closed Disposition: No Longer Applicable
Updated the handling of Null Data Elements (Volume II, Section 2.5).
Version Comment Addressed: TMDD v3.03c

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1482	UC156	Manny Insignares	TMDD v3.03c		TMDD v3.03c	

Comment: There are several data elements where 0 should be an acceptable value. For example, detector-vehicle-queue-length has a value of INTEGER(1..10000). However, if there is no queue, this value should show 0.

Suggest TMDD review data elements to allow a value of 0 where applicable.

Resolution: Comment Status: Open Disposition: Future
Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1483	UC156	Manny Insignares	TMDD v3.03c		TMDD v3.03c	

Comment: Add support for parking information using concepts from ATIS_J2354.

```
<!-- -->
<!-- ParkingLotInformationRequest Message -->
<!-- -->
<xs:element name="parkingRequest" type="atis-parking:ParkingRequestDetails"/>
<!-- -->
<!-- ParkingLotInformation Message -->
<!-- -->
<xs:element name="parkingLotInformation" type="ParkingLotInformation"/>
<!-- -->
<!-- ***** -->
<!-- Parking Information Data Frames -->
<!-- ***** -->
<!-- Descriptive Name: DF_ParkingLotInformation -->
<xs:complexType name="ParkingLotInformation">
  <xs:sequence>
    <!-- xs:element name="messageHeader" type="MessageHeader"/ -->
    <!-- xs:element name="head" type="Head" minOccurs="0"/ -->
    <xs:element name="location" type="lrms:GeoLocation"/>
    <!-- location for which this applies -->
    <xs:element name="isForecast" minOccurs="0">
      <xs:simpleType>
        <xs:restriction base="xs:boolean"/>
      </xs:simpleType>
    </xs:element>
    <!-- forecast or predicted period -->
    <xs:element name="forecastExpires" type="tmdd:DateTimeZone" minOccurs="0"/>
    <xs:element name="lot-ident" type="tmdd:Organization-resource-identifier"/>
    <xs:element name="parkingType" type="tcip-parking:PI-ParkingType"/>
    <xs:element name="percentFull" type="atis-parking:Percent"/>
    <xs:element name="lotDetail" type="LotInformation"/>
    <xs:element name="prices" type="atis-parking:PriceSchedule" minOccurs="0"/>
    <xs:element name="generalStatus" type="itis:ParkingInformation" minOccurs="0"/>
    <xs:element name="furtherData" type="atis-parking:URL-Link" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>
<!-- Descriptive Name: DF_LotInformation -->
<xs:complexType name="LotInformation">
  <xs:sequence>
    <xs:element name="spacesTotal" type="tcip-parking:PI-ParkingSpacesTotal"/>
    <xs:element name="availability" type="tcip-parking:PI-ParkingAvailability"/>
    <xs:element name="spaces" type="atis-parking:ParkingSpaceTypes"/>
    <xs:element name="lotName" type="atis-parking:Lot-Name"/>
    <xs:element name="hoursOfOperation" type="atis-parking:TimePair" minOccurs="0"/>
    <xs:element name="rates" type="tcip-parking:PI-ParkingRates" minOccurs="0"/>
    <xs:element name="parkingFillTime" type="tmdd:DateTimeZone" minOccurs="0"/>
    <!-- MSI: TRANSCOM Extension -->
    <xs:element name="airportName" type="tmdd:Organization-resource-name">
      <xs:annotation>
        <xs:documentation>
          <requirement>XCM Extension</requirement>
        </xs:documentation>
      </xs:annotation>
    </xs:element>
    <xs:element name="timestampExtracted" type="tmdd:DateTimeZone" minOccurs="0">
      <xs:annotation>
        <xs:documentation>
          <requirement>XCM Extension</requirement>
        </xs:documentation>
      </xs:annotation>
    </xs:element>
```

Comments

```

<xs:element name="timestampTransmission" type="tmdd:DateTimeZone" minOccurs="0">
  <xs:annotation>
    <xs:documentation>
      <requirement>XCM Extension</requirement>
    </xs:documentation>
  </xs:annotation>
</xs:element>
</xs:sequence>
</xs:complexType>
<!-- Descriptive Name: DF_VehicleRestrictions -->
<xs:complexType name="VehicleRestrictions">
  <xs:sequence>
    <xs:element name="basicType" type="itis:VehicleGroupAffected"/>
    <xs:element name="axleCount" type="tmdd:Link-restriction-axle-count" minOccurs="0"/>
    <xs:element name="axleWeight" type="tmdd:Link-restriction-weight-axle" minOccurs="0"/>
    <xs:element name="vehicleWeight" type="tmdd:Link-restriction-weight-vehicle" minOccurs="0"/>
    <xs:element name="vehicleHeight" type="tmdd:Link-restriction-height" minOccurs="0"/>
    <xs:element name="vehicleLength" type="tmdd:Link-restriction-length" minOccurs="0"/>
    <xs:element name="vehicleWidth" type="tmdd:Link-restriction-width" minOccurs="0"/>
    <!-- xs:element name="vehicleClass" type="tmdd:Link-restriction-class" minOccurs="0"/ -->
    <xs:element name="hasHAZMAT" minOccurs="0">
      <xs:simpleType>
        <xs:restriction base="xs:boolean"/>
      </xs:simpleType>
    </xs:element>
    <xs:element name="hasWaste" minOccurs="0">
      <xs:simpleType>
        <xs:restriction base="xs:boolean"/>
      </xs:simpleType>
    </xs:element>
    <xs:element name="convoy" minOccurs="0">
      <xs:simpleType>
        <xs:restriction base="xs:boolean"/>
      </xs:simpleType>
    </xs:element>
    <xs:element name="slowVehicle" minOccurs="0">
      <xs:simpleType>
        <xs:restriction base="xs:boolean"/>
      </xs:simpleType>
    </xs:element>
  </xs:sequence>
</xs:complexType>

```

Resolution: Comment Status: Open Disposition: Future

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1484	UC156	Manny Insignares	TMDD v3.03c		TMDD v3.03c	

Comment: Need to support archived data retrieval. There is a need to support historical values. Currently, TMDD support retrieval of current data (e.g., inventory or status). Need to support retrieval of historical information, such as a query/filter to retrieve inventory, data or status within a user selected timeframe.

Resolution: Comment Status: Open Disposition:

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1485	UC156	Manny Insignares	TMDD v3.03c		TMDD v3.03c	

Comment: Need to revisit detector-type. Add support for probe data detectors, e.g., bluetooth readers.

Resolution: Comment Status: Closed Disposition: Accepted
Added a new DetectorInventoryDetailsExt and DetectorMaintenanceHistoryDetailExt data frame with a new detector-type-extended data element to support a new 'probe' enumeration for detector-type.
Version Comment Addressed: TMDD v3.1

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1487	UC157	Gabriel Guevara	TMDD v3.03c		TMDD v3.03c	

Comment: The TMDD does not adequately handle mobile observations due to their dynamic nature (i.e., continuously changing location.) Currently, the TMDD handles metadata (including lat & long) as static data from a fixed station that changes very infrequently. With each new observation received from a mobile vehicle, the lat and long changes. In addition to road weather observations, we believe this issue it will affect all vehicles used in connected vehicle pilots, smart cities, full deployment of connected vehicles, etc. So, the question is: what needs to be done to have mobile observations included in the TMDD?

Resolution: Comment Status: Open Disposition: Future
Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1488	UC159	Steve Sill	TMDD v3.03c		TMDD v3.03c	

Comment: As a result of testing version 2 of the Center-to-Center Reference Implementation, we identified an error in TMDD v3.03c that impacts a number of data elements. The error is described below. Please acknowledge the finding and provide a date when the TMDD can be revised as part of maintenance to correct for the error.

Error Description:
The TMDD dmsControlDetails (section 3.3.6.2) references NTCIP.DmsMsgTableSource but should have referenced NTCIP.dmsMessageNumber for the TMDD message-number element in the TMDD. This is an error on the part of the TMDD. Unfortunately, the TMDD uses the wrong reference for all uses of message-number in the TMDD. This needs to be fixed in the RTM and in the asn.1 ASAP to reduce the risk of project failures.

Resolution: Comment Status: Closed Disposition: Accepted
Version Comment Addressed: TMDD v3.03d

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1489	UC158	Dan Carlson	TMDD v3.03c		TMDD v3.03c	

Comment: It seems that trends are moving away from SOAP/XML (especially SOAP) and I was wondering if TMDD has considered going toward a REST/JSON Center-to-Center solution?

Resolution: Comment Status: Open Disposition:
Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1490	UC160	John Amidon	TMDD v3.03c		TMDD v3.03c	

Comment: We are now under contract to provide a new data sharing service for UDOT and I naturally pushed to use the TMDD C2C standards. Being somewhat familiar with the data elements, I'm not too worried about creating content. However, I want to try and implement something that conforms at the application level protocols too.

I think for us that means NTCIP 2306 C2C XML. Here's the problem, having implemented a number of SOAP -based protocols , they can be hard to debug without writing a bunch of client-side test applications to test all the interfaces.

I was wondering if anything has been done in the way of REST-based interfaces, preferably using JSON over XML? Such an interface would be easy to test since all I would need is curl.

Resolution:	Comment Status: Open	Disposition:
Version Comment Addressed:		

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1491	UC161	Tomas Guerra	TMDD v3.03c		TMDD v3.03c	

Comment: We are interested in discussing standardized ways to save weather details provided by mobile vehicles (IMO-Integrated Mobile Observations). We have looked at the its-rde.net data exchange website and saw a sample from Belle Isle Data that may be relevant, but I'm not sure they are using a specific message set.

Resolution:	Comment Status: Open	Disposition:
Version Comment Addressed:		

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1492	UC162	Michelle Jones	TMDD v3.03c		TMDD v3.03c	

Comment: working .. on a Center to Center project for UDOT and have a few standards related questions for you.

We are updating our software and want to make sure we are using the latest and greatest version of the standard. Is TMDD 3.0.3 where we should start?

Our old C2C service included cameras, signs, detectors, events, ramp meters, routes, etc. We now have a request to share AVL Snow Plow information. I've read through many of the TMDD documents, but haven't found an object that seems to support this type of data. Do you have any recommendations for an approach?

Here's the data that we need to represent. I had planned on basing the inventory and status on the device model, the main difference being that the location information is dynamic and would be part of the status instead of the inventory.

Fleet Id - 123456
VIN - xxxxxxxxxx
Timestamp - 11/1/2015 08:00:00
Heading - North
Location - lat/long
Path - lat/long, lat/long

AVL Inventory
vehicle-inventory-header - standard entity information
vehicle-inventory-list - list of vehicles

Vehicle (Inventory Item)
vehicle-identifier - vehicle identifier
vehicle-type - type of vehicle being tracked, snow plow, etc.

AVL Status
vehicle-status-header - status header
vehicle-status-list - list of vehicles

Vehicle (Status Item)
vehicle identifier - vehicle identifier
vehicle heading - tmdd directions
vehicle location - (geo-location)
vehicle path - set of two or more coordinates
vehicle status - in service/out of service

Resolution: Comment Status: Open Disposition:

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1493	UC162	Michelle Jones	TMDD v3.03c		TMDD v3.03c	

Comment: One other question related to the tmdd.wsdl. I'm using C# .net4.5 to build our web service. It's expecting the Soap Action to be unique for each operation. I've read a few articles describing ways to infer the soapAction, but was wondering why these are empty? Or if you had any feedback from others on how they handled the soapAction? I am trying to avoid setting them manually, but if that's the solution, I can certainly do that.

Resolution: Comment Status: Closed Disposition: Accepted

The SoapAction may be filled in, but if it is not required, then it needs to having ' ' (single-quote space single-quote).

This was the advice the C2C WG received back in 2004 from someone who had worked with the W3C group (Tom Passin, who at the time was with Noblis).

At the time there were no WSDL tools around.

If that doesn't work, then, what I have done, is read the XML that is incoming to identify the message type.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1494	UC163	Kevin Drummond	TMDD v3.03c		TMDD v3.03c	

Comment: In 2012-2013, McCain extended the TMDD schema in order to provide complete sets of timing data for certain local traffic controller programs. At the time there were four programs used heavily across the region and we focused on defining messages for them only. Since then, the diversity of controller programs has grown and we are considering changes to our extension to accommodate delivery of timing data for all devices using a single 'unified' message set. For example, for a McCain 200 program firmware we previously defined a message Mc200Coordination that the TMDD client can call to retrieve coordination plan data for programs of this type. Similarly, a McCain 233 program has a Mc233CoordinationBank1 message for the same data. And with McCain's NTCIP-based controller, which was not included in the original extensions, we could design a similar message, and do so for all new controller programs going forward. But I think a better approach would be to design a unified coordination message that all programs would implement. This would incur some mapping between programs and some decisions on when and how to include certain parameters (and when to exclude as well), but it would also not require schema changes when new program types are introduced into the region. And as we are better informed as to how the timing data is used by the region's ICMS solution, we would be able to tailor the resulting message set to their usage

Resolution:	Comment Status:Open	Disposition:
Version Comment Addressed:		

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1498	UC164	Jens Glufke	TMDD v3.03c		TMDD v3.03c	

Comment: I am working for Siemens Intelligent Traffic Systems on a project in Israel where we have to connect our traffic management system to the National Traffic Management System via NTCIP C2C. I found your name in TMDD.wsdl and so I hope you can help me with a question that you probably answered already a couple of times.

NTCIP 2306 states the SOAP requirement R2710 which declares that operations have to have a unique signature. If I look at the wsdl I find e.g.

```
<!-- CCTV -->
<operation name="dlCCTVInventoryRequest">

<documentation><objectClass>CCTV</objectClass><objectClass>ExternalCenter</objectClass><objectClass>Owner
Center</objectClass><msgPattern>R-R</msgPattern><requirement>REQ549</requirement></documentation>
  <input message="tns:MSG_DeviceInformationRequest" />
  <output message="tns:MSG_CCTVInventory"/>
  <fault name="errorReport" message="tns:MSG_ErrorReport"/>
</operation>
<operation name="dlCCTVStatusRequest">

<documentation><objectClass>CCTV</objectClass><objectClass>ExternalCenter</objectClass><objectClass>Owner
Center</objectClass><msgPattern>R-R</msgPattern><requirement>REQ546</requirement></documentation>
  <input message="tns:MSG_DeviceInformationRequest"/>
  <output message="tns:MSG_CCTVStatus"/>
  <fault name="errorReport" message="tns:MSG_ErrorReport"/>
</operation>

<!-- CCTV -->
<operation name="dlCCTVInventoryRequest">
  <soap:operation soapAction="" style="document"/>
  <input>
    <soap:body use="literal"/>
  </input>
  <output>
    <soap:body use="literal"/>
  </output>
  <fault name="errorReport">
    <soap:fault name="errorReport" use="literal"/>
  </fault>
</operation>
<operation name="dlCCTVStatusRequest">
  <soap:operation soapAction="" style="document"/>
  <input>
    <soap:body use="literal"/>
  </input>
  <output>
    <soap:body use="literal"/>
  </output>
  <fault name="errorReport">
    <soap:fault name="errorReport" use="literal"/>
  </fault>
</operation>
```

which contradicts in my opinion (and in the opinion of java wsimport as well) the unique signature requirement for the marked parts. Do you have some kind of documentation to solve this.

Resolution: Comment Status: Closed Disposition: Informative
Regarding the issue of duplicate signatures.

It is the operation names that need to be uniquely identified. Such as, <operation name="dlCCTVInventoryRequest">

We are aware that there are tools (particularly java tools) that are unable to import the WSDL.

Other tools are fine with the WSDL: for example, SOAP-UI, and Altova XMLSpy.

Friday, March 13, 2020

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Comments

If you have a suggestion for modifications to the WSDL, please forward as a comment

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1499	UC164	Jens Glufke	TMDD v3.03c		TMDD v3.03c	

Comment: My intention is not to start a big discussion about who is wrong or right concerning soap standard, because I am not really the expert here.

But, maybe just as input to think about is what is stated in standard <http://ws-i.org/profiles/basicprofile-2.0-2010-11-09.html> for R2710

4.7.5 Operation Signatures

Definition: operation signature

The Profile defines the "operation signature" to be the fully qualified name of the child element of SOAP body of the SOAP input message described by an operation in a WSDL binding and the URI value of the wsa:Action SOAP header block, if present.

In the case of rpc-literal binding, the operation name is used as a wrapper for the part accessors. In the document-literal case, since a wrapper with the operation name is not present, the message signatures must be correctly designed so that they meet this requirement.

An endpoint that supports multiple operations must unambiguously identify the operation being invoked based on the input message that it receives. This is only possible if all the operations specified in the wsdl:binding associated with an endpoint have a unique operation signature.

R2710 The operations in a wsdl:binding in a DESCRIPTION MUST result in operation signatures that are different from one another. CORE TESTABLE BP2120a BP2120b

To the first section "The profile defines....." means the "operation signature" is the soap body of the input message and the content of wsa:Action . For my example (binding part)

```
<operation name="dlCCTVInventoryRequest">
  <soap:operation soapAction="" style="document"/>
  <input>
    <soap:body use="literal"/>
  </input>
```

wsa:Action is not set, input message is defined as <input message="tns:MSG_DeviceInformationRequest" /> in the operation part of the wsdl.

To the second section "In the case of rpc-literal". rpc-literal binding does not apply since TMDD defines document-literal. So, the sentence "In the document-literal..." sentence applies. And for document-literal case a wrapper with the operation name is not present in the message that goes over the wire.

To the third section "An endpoint that supports...". Thus, the signature has to be unambiguous. And because in TMDD several operations are using the same message type as input message, they are not unambiguous from my point of view.

In the meantime I applied a work around to the wsdl to make it work at least with the java wsimport tooling.

I changed the binding to

```
<operation name="dlCCTVInventoryRequest">
  <soap:operation soapAction="dlCCTVInventoryRequest" style="document"/>
  <input>
    <soap:body use="literal"/>
  </input>
  <output>
    <soap:body use="literal"/>
  </output>
  <fault name="errorReport">
    <soap:fault name="errorReport" use="literal"/>
  </fault>
</operation>
```

Comments

And it works. But, from my point of view this also depends on the tooling and is not really SOAP standard compliant.

Resolution:

Comment Status:Open

Disposition: Informative

Just a few comments/questions back so I can understand the issue a little better.

1. soapAction: The 2306 standard supports modification of the soapAction (just as you have done). The standard only specifies that in the case where no soapAction is needed that it include the "" ". Is the issue that the soapAction must be unique?

2. unambiguous endpoints: Your implementation may need to parse the incoming message <input message > to determine how to handle the request. At least, that is what I have had to do. Is the issue that the <input> should be unique across operations.

A future revision of the standard (the current draft dates to 2008 timeframe) would need to consider these comments, in addition to comments from other users of java-based tools.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1500	UC164	Jens Glufke	TMDD v3.03c		TMDD v3.03c	

Comment: If 2306 is fine with my modification to the WSDL it is perfect for me.

As far as I understood is the issue that if you are using TMDD.wsdl as it is the message on the wire (how you would see it in e.g. Wireshark) would only contain the payload of the input message. e.g. MSG_DeviceInformationRequest. The receiving server only receives this information and does not know whether to map it to diCCTVInventoryRequest or diCCTVStatusRequest.

Resolution: Comment Status: Closed Disposition: Informative

On the wire you would see a soapMessage.

In the soapBody you would see the TMDD message.

Inside the device request message would be a data frame that looks like this:

```
<deviceRequestMsg>
```

...

So, for a cctv inventory you would also have a bit of XML that looks like this:

```
<device-type>cctv camera</device-type>  
<device-information-type>device inventory</device information-type>
```

The device-type would be one of the following:

```
<xs:enumeration value="detector"/>  
<xs:enumeration value="cctv camera"/>  
<xs:enumeration value="dynamic message sign"/>  
<xs:enumeration value="environmental sensor station"/>  
<xs:enumeration value="gate"/>  
<xs:enumeration value="highway advisory radio"/>  
<xs:enumeration value="lane control signal"/>  
<xs:enumeration value="ramp meter"/>  
<xs:enumeration value="signal controller"/>  
<xs:enumeration value="signal section"/>  
<xs:enumeration value="video switch"/>  
<xs:enumeration value="other"/>
```

And the device-information-type would be one of the following:

```
<xs:restriction base="xs:string">  
  <xs:enumeration value="device inventory"/>  
  <xs:enumeration value="device status"/>  
  <xs:enumeration value="device schedule"/>  
  <xs:enumeration value="device plan"/>  
  <xs:enumeration value="device maintenance history"/>  
  <xs:enumeration value="device data"/>  
  <xs:enumeration value="device metadata"/>  
  <xs:enumeration value="message appearance"/>  
  <xs:enumeration value="device font table"/>  
  <xs:enumeration value="other"/>  
</xs:restriction>
```

Therefore, your software would have to read the request message to determine what type of device and what type of information before handling the request.

Bottomline, there is some rationale for having the unique signatures, but that is not what the standard states.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1501	UC165	Lynne Randolph	TMDD v3.03c		TMDD v3.03c	

Comment: See that subscriptionAction which contains a sequence of subscriptionAction-item elements? Well, those items are an enum consisting of five values (reserved, newSubscription, replaceSubscription, cancelSubscription, cancelAllPriorSubscriptions). It doesn't make sense to have more than one of them.

The question comes up on the C2cMessageSubscription (picture below). I saw that there was a history entry (#20) related to the SubscriptionType which seems similar to this issue with the SubscriptionAction-item.

Resolution: Comment Status: Closed Disposition: Informative
You are correct that there should be only one entry for each of the subscriptionAction and subscriptionType entries.

I would suggest adding just the one entry in slot #1 (of the 10).

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1502	UC166	Walter Crear	TMDD v3.03c		TMDD v3.03c	TMDD Volume I, 3.3.3.4

Comment: 3.3.3.4 Contents of Event Information Request
An external center shall send an event information request to an owner center.

3.3.3.4.1 Required Event Information Request Content

The event information request sent from an external center to an owner center shall include:

- Unique identifier of the requesting organization;
- Event message type version (TMDD v2.1, TMDD v3.0x);
- Event message number;
- The date and time the request was sent; and
- Request filter limit (specific events, specific response plans, all current events, all event updates, all response plans).

From Volume II, 3.3.8.41:

```
<xs:element name="organization-requesting" minOccurs="0">
  <xs:complexType>
    <xs:sequence maxOccurs="20">
      <xs:element name="organizations-requested-item" type="OrganizationInformation"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="message-type-id" type="Event-message-type-identifier"/>
<xs:element name="message-type-version" type="Event-message-type-version"/>
<xs:element name="message-number" type="Event-message-number" minOccurs="0"/>
<xs:element name="message-time-stamp" type="DateTimeZone"/>
<xs:any namespace="##other" processContents="lax" minOccurs="0"/>
</xs:sequence>
</xs:complexType>
```

Event message number is mandatory in the text, but optional in Volume II.

Resolution: Comment Status: Closed Disposition: Informative
There are certain situations where a data element is mandatory to satisfy a requirement, but optional when the same message/data frame/data element to satisfy a different requirement.

In this example, the same data frame, requestHeader, is used to fulfill requirement 3.3.3.9.4.1, Required Event Index Request Content. However, the event message number is not mandatory to fulfill that requirement.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1503	UC167	Manny Insignares	TMDD v3.03c		TMDD v3.03c	

Comment: Valid WSDL and XML Schema

Regarding Section 2.1.4 TMDD WSDL and XML Schema.

This section is normative, please consider making a numbered list of items and adding the following.

Please add an item: "The TMDD requires for conformance that any tailored TMDD WSDL used in a deployment and representative of TMDD dialogs is valid per the WSDL 1.1 XML Schema as published by the W3C and as specified in NTCIP 2306 v01. WSDL may be tested using a software validation tool, such as the C2C RI or other."

Please add an item: "The TMDD requires for conformance that any tailored TMDD XML Schema used in a deployment and representative of TMDD XML messages is valid per the XML Schema specification published by the W3C and as specified in NTCIP 2306 v01. Validation of the XML Schema may be tested using a software validation tool, such as the C2C RI or other."

Resolution:	Comment Status: Closed	Disposition: Accepted
Updated the language in Section 2.1.3, TMDD WSDL and XML Schema in Volume II, to clarify ambiguities about conformance with the TMDD standard and how the TMDD standard can be implemented.		
Version Comment Addressed:	TMDD v3.1	

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1504	UC167	Manny Insignares	TMDD v3.03c		TMDD v3.03c	

Comment: Handling of Extensions

During testing of C2C RI at TRANSCOM, the C2C RI tool flagged as an error the method used by TRANSCOM for handling of extensions. The TMDD language in volume 2 should be clarified as to how deployments should handle extensions. Without these clarifications deployments may implement extensions in ways that are incompatible with C2C RI or other validation tool. Such was the case at TRANSCOM. TRANSCOM subsequently made software updates and passed all C2C RI tests.

Regarding Section 2.6.2.2 XML, which states:

"In addition, the line shows that: 1) a namespace must be defined that defines the new extended content; 2) the contents will not be validated; and 3) that the extension is optional (minOccurs="0")."

Please add item: 4) the extension must be enclosed in its own XML element, for example <ns4:extension>.

Suppose we wanted to add an extension consisting of 2 elements, called <bufferZone> and <inclineMethod>. The tailored schema would define a namespace, let's say "ns4".

The actual XML should look as follows:

```
<ns4:extension>  
  
  <bufferZone>3</bufferZone>  
  
  <inclineMethod>squareRoot</inclineMethod>  
  
</ns4:extension>
```

How this shows up as a problem:

The TMDD is clear that extension elements must be added at the end of a data frame or message, but does not state that extended elements must be enclosed in their own XML element.

Section 2.6.2.2. XML states that: "The xs:any construct in full form will be added as the last element of each message and data frame."

The problem is that the "xs:any" construct applies to only 1 element, and not several, so if you want to have an extension with multiple items (as in my example which has two items - the bufferZone and the inclineMethod). The result is that any XML then validated against the ITE TMDD xml schema will fail, which is the result when using the C2C RI tool.

Without going into the detail, there is another scenario of implementing the extension recommendation of section 2.6.2.2, which results in proper validation against a tailored schema, but fails when validated against the TMDD Schema.

Resolution:	Comment Status: Closed	Disposition: Accepted
Corrected the built-in mechanism for XML extensibility mechanism that is contained in the content of each TMDD data frame. The prior <xs:any namespace="##other" processContents="lax" minOccurs="0"/> at the end of each data frame in TMDD has been updated to <xs:any namespace="##other" processContents="lax" minOccurs="0" maxOccurs="unbounded"/>. This change allows TMDD version update extensions and project-specific extensions.		
Version Comment Addressed:	TMDD v3.1	

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1505	UC166	Walter Crear	TMDD v3.03c		TMDD v3.03c	

Comment: In the RTM below, I think the Data Concept Instance Name for requirement 3.3.5.1.7.2 should be device-priority-queue-header. Either that or DevicePriorityQueueHeader should be defined in the footnote.

Resolution: Comment Status: Closed Disposition: Rejected

Checked, and the RTM appears to be correct.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1506	UC168	Kevin Drummond	TMDD v3.03c		TMDD v3.03c	

Comment: An extension to the max length of the Organization-resource-identifier. It has come to my attention that the max length described in TMDD.xsd currently sits at 32 characters, but systems using Guid (uniqueidentifier) fields for their identifiers fail this validation, as a Guid length is 36 characters. I think the use of Guid is a popular trend in applications, and I believe TMDD should be accepting of it without modifying the standard.

Resolution: Comment Status: Closed Disposition: Rejected

Unable to do this without breaking backwards compatibility. Considered adding an extension but unsure if it would be really used by other implementations. Decided to leave as is and allow the existing SANDAG implementation to address it as a project-level extension

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1507	UC169	Israel Lopez	TMDD v3.03c		TMDD v3.03c	

Comment: Submit for the inclusion of DSRC to be considered as part of the TMDD standard (see attachment). Though the standard is an SAE J2735 standard, there is no set standard for C2C or archiving of the information within the current TMDD standard for regular vehicles let alone snow plows. As part of the Nevada Intelligent Mobile Observation (NIMO) project, we were forced to use a subset of NTCIP 1204, SAE J2735, NMEA 0183, and created message sets that were not addressed elsewhere into a single usable standard based on TMDD.

Resolution: Comment Status: Open Disposition:

Support for connected vehicles are a new user need and outside of the existing ITS maintenance support contract.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1508	UC169	Israel Lopez	TMDD v3.03c		TMDD v3.03c	

Comment: As part of the NIMO/mESS project, we have completed an agreement with NOAA, National Center for Atmospheric Research (NCAR), and Weather Data Environment (WxDE) to access the NDOT NIMO/ESS data using the mESS (IMO) and TMDD (RWIS/ESS) messages sets. (Additional Information: WxDE - <https://wxde.fhwa.dot.gov/>)

Resolution: Comment Status: Open Disposition:

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1509	UC169	Israel Lopez	TMDD v3.03c		TMDD v3.03c	

Comment: Waze Closure and Incident Feed Specifications v2.0." The intent is to discuss what this means and obtain an opinion from the TMDD Steering Committee for NDOT. NDOT will be integrating with WAZE CIFS 2.0 in the next eight (8) months. Many other DOTs have completed similar projects, and it would be valuable to gain a broader perspective. WAZE CIFS 2.0: https://blog.waze.com/p/blog-page_19.html

Resolution: Comment Status: Open Disposition:

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1510	UC169	Israel Lopez	TMDD v3.03c		TMDD v3.03c	

Comment: FEMA IPAWS OASIS CAP messages should be discussed at some point. If you are getting weather events from NOAA for your 511 system, then you are already using a form of CAP messages.

Common Alerting Protocol: <https://www.fema.gov/common-alerting-protocol>

Fact Sheet: http://www.fema.gov/media-library-data/1450108807753-9a5ba3b082b719d9a63d54b500df8193/CAP_Implementation_Fact_Sheet_2016.pdf

NOAA Weather Messages (<https://alerts.weather.gov/>) are automatically entered into 511 and stored in the NDEX (NOAA - Nevada Weather Messages: <https://alerts.weather.gov/cap/nv.php?x=1>)

Resolution:	Comment Status: Open	Disposition:
Version Comment Addressed:		

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1511	UC170	Lorie Pannowitz	TMDD v3.03c		TMDD v3.03c	

Comment: Commencing in 2012, Roads and Maritime Services (RMS) began the implementation of the "Centre to Centre" (C2C0 interface based on TMDD v3.0. RMS is now looking at thw at is necessary to conform to TMDD v3.03c, but have several concerns due to changes in conformance requirements since v3.0.

1. Subset of TMDD mandatory user needs

The RMS C2C rproject selected user needs necessary to meet business needs. This resulted in a subset of TMDD user needs being supported (refer Appendix A), and excluded the following user needs.

2.3.5.1.1, Need for Node Inventory (TMDD V3.0 Vol1-pg209)

2.3.5.1.2, Need for Link Inventory (TMDD V3.0 Vol 2-pg210)

Referring to Needs to Requirements Traceability Matrix TMDD V3.03c the 2.3.4.1 Need for Road Network Inventory conformance column is blank and therefore open to interpretation.

Note: RMS have implemented all mandatory elements within or under the selected user needs.

Concern: Are 2.3.4.1.1 Need for Node Inventory and 2.3.4.1.2. Need for Link Inventory mandatory?

Resolution:	Comment Status: Closed	Disposition: Informative
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In TMDD v3.03c, the user needs, Need for Node Inventory and Need for Link Inventory are both mandatory user needs to conform to TMDD v3.03c. There are few actual user needs that are mandatory in TMDD v3.03c, and these are two of them. The reasoning was that to share events and device information, a common set of links (e.g., streets and roadways) have to be defined and agreed upon for the transportation network. Links are defined by nodes, thus nodes become mandatory also. I believe that if an implementation does not use links and nodes, they should simply use geocoding (latitude, longitude). If they do support the link and node inventory, they should conform to the TMDD standard.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1512	UC170	Lorie Pannowitz	TMDD v3.03c		TMDD v3.03c	

Comment: 2. Custom WSDL

RMS created WSDL files for multiple logical services. E.g. Incident, Device, Device Control, Sensor. Each WSDL file contains the operations necessary to implement the selected dialogs. This approach enabled these services to be separated at runtime, rather than be one monolithic runtime component Individual services can be turned off/on, and upgraded, without impacting other services.

Note: NTCIP2306 is silent in regard to how you go about implementing.

Concern: Must the TMDD standard's WSDL file be used without modification, or can it be split into runtime services and still be considered conformant?

Resolution:	Comment Status: Closed	Disposition: Informative
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The TMDD WSDL was intended to be modified. Breaking the WSDL into "partitions" has been done in practice.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1513	UC170	Lorie Pannowitz	TMDD v3.03c		TMDD v3.03c	

Comment: 3. WSDL target namespaces

The target namespaces in the new WSDL files were created to reflect to type of node (central, motorway, ESB). This was done to comply with RMS SOA guidelines.

Concern : Must the target namespaces in the TMDD WSDL remain unchanged to be considered conformant in V3.03?

Resolution: Comment Status: Closed Disposition: Informative

This will require a little investigation. We use the ITE's C2C RI (Center-to-Center Reference Implementation) tool to verify conformance of a deployment (web service) with TMDD. We would need to test this.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1514	UC170	Lorie Pannowitz	TMDD v3.03c		TMDD v3.03c	

Comment: 4. Operation and Wrapping Messages

The name of the operations in the WSDL files were aliased to use RMS standard SOA naming conventions

Examples:

"dlFullEventUpdateUpdate" aliased to "publishIncidentInformation"

"dlDMSStatusRequest" aliased to "getDMSStatus"

In the SOAP body payload, the TMDD messages were wrapped in an additional element with a name that aligned with the renamed operations.

Examples:

Request message: "deviceInformationRequestMsg" was wrapped in a

"getDMSStatus" element.

Response message: "dMSStatusMsg" was wrapped in a "getDMSStatusResponse" element.

Concern : Can the message elements be referenced to non-standard elements without breaking conformance? Are there alternative approaches we should consider?

Resolution: Comment Status: Closed Disposition: Informative

The C2C RI expects the dialog names and message names to be exactly as published in the TMDD.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1515	UC170	Lorie Pannowitz	TMDD v3.03c		TMDD v3.03c	

Comment: 5. Repurposing data frames

The ActionLog data-frame was repurposed. TMDD v3.0, vol. 1, sec. 3.3.4.8 states:

"The action logs act as a timeline for the event where each action log element represents a change to an event, or a free text description that describes an operator or device function that is associated with an event."

The RMS implementation has used the ActionLog data frame to provide a free text communication facility between operators in separate control centres that are working in concert over an incident. Such as:

- Confirming that appropriate VMS's have been set on surrounding arterial roads in support of a motorway incident;
- Queries related to the incident eg. Who is onsite?, Do you need some additional road crews?

The FullReportText data-frame is being used for the individual operator log comment describing the actions taken to manage the event, or an event that has occurring during the incident.

Concern: Does the RMS interpretation break conformance?

Resolution: Comment Status: Closed Disposition: Informative

I believe the RMS use of the ActionLog data frame is consistent with the TMDD standard. The field is free flow text and is being used to describe the specific actions that are being taken related to the event.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1516	UC170	Lorie Pannowitz	TMDD v3.03c		TMDD v3.03c	

Comment: 6. Method of adding a new element

Where new elements have been added to TMDD data-frames, the method to achieve this has been to:

1. Rename the TMDD complex type in TMDD.xsd. E.g. "DeviceStatusHeader" is renamed to "DeviceStatusHeader_TMDD".

2. Define a new complex type in TMDD-Extensions.xsd, using the original TMDD type name, which extends the TMDD-defined complex type.

```
<xs:complexType name="DMSStatus">
```

```
  <xs:annotation>
```

```
    <xs:documentation>Includes a message beacon element as per 3.9.0.0.3 Update</xs:documentation>
```

```
  </xs:annotation>
```

```
<xs:complexContent>
```

```
  <xs:extension base="tns:DMSStatus_TMDD">
```

```
    <xs:sequence>
```

```
      <xs:element name="message-beacon" type="ntcip:DmsMessageBeacon" minOccurs="0"/>
```

```
      <xs:element name="message-beacon-type" type="ntcip:DmsBeaconType" minOccurs="0"/>
```

```
    </xs:sequence>
```

```
  </xs:extension>
```

```
</xs:complexContent>
```

```
</xs:complexType>
```

Concern: Is this method of extending data-frames conformant, ignoring the namespaces of the extension elements?

Resolution:

Comment Status: Closed

Disposition: Informative

We are not sure what the impact would be of this approach to adding an extension. Here is some proposed text regarding handling extensions:

2.6.2.2 XML

The XML schema has a built-in mechanism for extensibility that can be applied to the message and data frame content of TMDD; it is the "xs:any" construct. The xs:any construct in full form will be added as the last element of each message and data frame. An example is shown below.

```
<xs:any namespace="##other" processContents="lax" minOccurs="0"/>
```

Adding this line to the end of each TMDD message and data frame in the XML schema will allow a single XML element to be located at the end of a message or data frame to be valid. This single element may be a dataframe that contains other child elements. The line specifies that: 1) a namespace must be defined that defines the new extended content; 2) the contents will not be validated; 3) that the extension is optional (minOccurs="0"); and 4) the extension must be enclosed in its own XML element, for example <ns4:extension>.

For example, if an extension is desired to include two elements, called <bufferZone> and <inclineMethod>, the tailored schema would define a namespace, say "ns4." The XML would include a single XML dataframe, <ns4:extension> that contains the two child elements - <bufferZone> and <inclineMethod>. The XML should look as follows:

```
<ns4:extension>
```

```
  <bufferZone>3</bufferZone>
```

```
  <inclineMethod>squareRoot</inclineMethod>
```

```
</ns4:extension>
```

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1517	UC170	Lorie Pannowitz	TMDD v3.03c		TMDD v3.03c	

Comment: 7. No custom namespace

When new elements have been added to existing data-frames either the TMDD namespace has been use. Example of how elements have been added:

```
xmlns:tns="http://www.tmdd.org/3/messages"
<xs:complexType name="DeviceStatusHeader">
  <xs:complexContent>
    <xs:extension base="tns:DeviceStatusHeader TMDD ">
      <xs:sequence>
        <xs:element name="device-error" type="tns:Device-error" minOccurs="0"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

Concern: It appears this method of adding elements to data-frames does not meet the latest conformance requirements. Is there a method to remain backward compatible?

Resolution: Comment Status: Closed Disposition: Informative

We are not sure what the impact would be of this approach to adding an extension. Here is some proposed text regarding handling extensions:

2.6.2.2 XML

The XML schema has a built-in mechanism for extensibility that can be applied to the message and data frame content of TMDD; it is the "xs:any" construct. The xs:any construct in full form will be added as the last element of each message and data frame. An example is shown below.

```
<xs:any namespace="##other" processContents="lax" minOccurs="0"/>
```

Adding this line to the end of each TMDD message and data frame in the XML schema will allow a single XML element to be located at the end of a message or data frame to be valid. This single element may be a dataframe that contains other child elements. The line specifies that: 1) a namespace must be defined that defines the new extended content; 2) the contents will not be validated; 3) that the extension is optional (minOccurs="0"); and 4) the extension must be enclosed in its own XML element, for example <ns4:extension>.

For example, if an extension is desired to include two elements, called <bufferZone> and <inclineMethod>, the tailored schema would define a namespace, say "ns4." The XML would include a single XML dataframe, <ns4:extension> that contains the two child elements - <bufferZone> and <inclineMethod>. The XML should look as follows:

```
<ns4:extension>
  <bufferZone>3</bufferZone>
  <inclineMethod>squareRoot</inclineMethod>
</ns4:extension>
```

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1518	UC170	Lorie Pannowitz	TMDD v3.03c		TMDD v3.03c	

Comment: New enumerations have been added to existing elements. Examples to changes in ITIS-Local-03-00-02.xsd:

Added enumeration "off-motorway incident" to AccidentsAndIncidents type.

Added enumeration "bushfire" to Disasters type.

Added enumeration "fire in tunnel" to Disasters type.

Added enumeration "system failure" to TunnelSystemFault type.

Added enumeration "adverse weather" to WeatherConditions type.

Added enumeration "air quality" to TunnelSystemOperations type.

Note that some of these changes duplicate the meaning of existing enumerations, but using the common Australian term. E.g. "bushfire" and "wild fire".

Concern: Is this method of adding enumerations conformant?

Resolution: Comment Status: Closed Disposition: Informative

Normally if an enumeration exists, you are not allowed to make a new enumeration with duplicate meanings to remain conformant, such as bushfire and wild fire. I understand the issue of different terms between Australia and the US. One possible way around this is to still use the enumeration for "wild fire" across the interface, but display it as bushfire on the operators, screens, but I understand the issue. I personally am fine with the other enumerations.

Version Comment Addressed:

Friday, March 13, 2020

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Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1519	UC170	Lorie Pannowitz	TMDD v3.03c		TMDD v3.03c	

Comment: 1. Extending ranges

We may need to extend the range of values allowed for an element E.g. DMS priority (command-request-priority element) is limited to the values of 1-10 inclusive. Due to an evolving business operating model we may need to expand that to 1-99.

Concern: Do we need to define our own custom element to achieve this?

Resolution: Comment Status: Closed Disposition: Informative
Technically, TMDD requires that a custom element be defined (See Section 1.8, item 8, Conformance, TMDD v3.03c, Volume I). The rationale for this was so different implementations in different regions could exchange information consistently. The likelihood an implementation in the United States will exchange information with Australia is pretty unlikely. So, if Australia wants to redefine the range to 1-99 for all devices...

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1520	UC170	Lorie Pannowitz	TMDD v3.03c		TMDD v3.03c	

Comment: 2. Ramp metering status

RMS is embarking on a ramp metering project. Initial analysis of the TMDD ramp metering data-frames is that they are no good fits to convey the concepts involved.

Concern: Do we need to define our own custom dialogs, messages, and dataframes if the TMDD is not a good conceptual fit?

Resolution: Comment Status: Closed Disposition: Informative
We understand that the approach to ramp metering may differ in the United States than Australia. So, your user needs and specific requirements for ramp metering may differ. We would agree that you should create your own dialogs, messages and data frames if TMDD is not a conceptual fit. Ideally, if your customized data concepts can reuse anything (e.g., data frames such as the device-information-header, or data elements), we would recommend that you do so.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1521	UC170	Lorie Pannowitz	TMDD v3.03c		TMDD v3.03c	

Comment: 3. V3.04

Are there any changes to the conformance requirements planned for TMDD v3.04?

Resolution: Comment Status: Closed Disposition: Informative
The TMDD Steering Committee is meeting on December 13, 1 PM EST. An agenda item is to discuss V3.04, but we're not aware of any proposed changes to the conformance requirements. We'll send you the webconference link.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1522	UC170	Lorie Pannowitz	TMDD v3.03c		TMDD v3.03c	

Comment: 1. Previous releases contained a Requisite Pro Database. Are the TMDD v3.03c requirements traceability matrices from vol.1 and vol.2 available in a format that could be easily imported into this or another tool?

Resolution: Comment Status: Closed Disposition: Informative
1. During the development of TMDD v3.00, Requisite Pro was used to assist the tracing of requirements. The XML schema and the Microsoft Word version of the TMDD v.30+ still has remnants of that traceability. In the XML schema, you'll find tags that begin with <REQxxxx>. In the Microsoft Word version, if you Display hidden text, you'll also find bookmarks for <UNxxx> for user needs and <REQxxxx> for requirements. We don't use Requisite Pro for development anymore. It became cumbersome to maintain, but we do have the Needs-to-Requirements Matrix (at least for v3.03c and perhaps earlier versions) in Microsoft Excel if that helps.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1523	UC170	Lorie Pannowitz	TMDD v3.03c		TMDD v3.03c	

Comment: 2. Can you recommend tools or approach to define the user specific implementation (i.e. subset of TMDD used). Such as:

- using <xs: annotation> embedded in TMDD.xsd
- a method to generate HTML documentation;
- a mapping table/spreadsheet
- removing parts of the TMDD.xsd not used;

Resolution: Comment Status: Closed Disposition: Informative

2. We use XMLSpy to manage the XML schema. One of the benefits of XMLSpy is it can output the schema in HTML format. We also previously had a script in Microsoft Word that would look for the <UN> and <REQ> tags in a Microsoft Word document, then create a mapping table in a text format.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1524	UC170	Lorie Pannowitz	TMDD v3.03c		TMDD v3.03c	

Comment: 3. Do you have a recommended approach to document the definition of message elements and values, such as:

- Which elements are mandatory,
- Clarifying the meaning of elements or values.

Resolution: Comment Status: Closed Disposition: Informative

3. These are documented in the Needs to Requirements Traceability Matrix (NRTM). We generally create an MS Excel representation of the NRTM for projects and then adjust the Optional elements made Mandatory on a project basis.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1525	UC170	Lorie Pannowitz	TMDD v3.03c		TMDD v3.03c	

Comment: 4. We are considering developing a schematron schema per message type to define the content rules for:

- Implementation specific mandatory elements
- Restrictions on element multiplicity
- Allowed values, where values need to be restricted to a subset of allowed values;
- Cross-element validation rules a) allowed values in one element depending on a value in another element; b) elements becoming mandatory based on a value in another element .

Resolution: Comment Status: Closed Disposition: Informative

4. We don't have specific experience with the Schematron representation for XML schemas.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1526	UC171	Manny Insignares	TMDD v3.03c		TMDD v3.03c	Volume II:2.1.4

Comment: Proposal for TMDD Volume II.

2.1.4 TMDD WSDL and XML Schem

1. Volume II presents XML fragment representation of dialogs, messages, data frames and data elements. These fragments use XML namespace prefixes, such as "xs:" and "it is:", that represent a shorthand for specific corresponding URIs defined in the TMDD WSDL and XML Schema. All namespaces left unspecified in the XML fragments are completely specified in the normative TMDD.xsd and TMDD.wsdl files (see Volume II, Table 1).

2. Within the TMDD.wsdl file, the tns is a namespace called "this namespace". The namespace the WSDL uses for itself is defined in the tns, and is appropriately referred to as './dialogs'. The TMDD.wsdl also references elements defined in other namespaces. The TMDD.wsdl references message names contained in the TMDD.xsd schema. The namespace is defined in the TMDD.xsd schema as './messages'. The TMDD.wsdl must use this name in referencing the TMDD messages. The NTCIP 2306 C2C group gave the name './c2c-message-administration' to the C2C schema elements. The TMDD.wsdl must use this name to reference the elements used to define messages for publication and subscription dialogs.

3. Note that the TMDD XML Schema and WSDL that define the TMDD data concepts are copyrighted by AASHTO/ITE and thus cannot be changed.

4. Note: The location attributes of the service descriptions are used to supply the actual URL that needs to be contacted to use the service. In actual practice, each center would customize this file to include the correct URLs for the services it provides. Therefore, the location URLs given in this file are dummy values, used for illustrative purposes only.

5. The TMDD requires for conformance that any tailored TMDD WSDL used in a deployment and representative of TMDD dialogs is valid per the WSDL 1.1 XML Schema as published by the W3C and as specified in NTCIP 2306 v01. WSDL may be tested using a software validation tool, such as the C2C RI or other.

6. The TMDD requires for conformance that any tailored TMDD XML Schema used in a deployment and representative of TMDD XML messages is valid per the XML Schema specification published by the W3C and as specified in NTCIP 2306 v01. Validation of the XML Schema may be tested using a software validation tool, such as the C2C RI or other.

Resolution:

Comment Status: Closed

Disposition: Accepted

Updated the language in Section 2.1.3, TMDD WSDL and XML Schema in Volume II, to clarify ambiguities about conformance with the TMDD standard and how the TMDD standard can be implemented.

Version Comment Addressed:

TMDD v3.1

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1527	UC171	Manny Insignares	TMDD v3.03c		TMDD v3.03c	Volume II 2.6.2.2

Comment: Proposal for TMDD Volume II.

2.6.2.2XML

The XML schema has a built-in mechanism for extensibility that can be applied to the message and data frame content of TMDD; it is the "xs:any" construct. The xs:any construct in full form will be added as the last element of each message and data frame. An example is shown below.

```
<xs:any namespace="##other" processContents="lax" minOccurs="0"/>
```

Adding this line to the end of each TMDD message and data frame in the XML schema will allow a single ny XML element to be content that is located at the end of a message or data frame to be valid. This single element may be a dataframe that contains other child elements. The In addition, the line specifies hows that: 1) a namespace must be defined that defines the new extended content; 2) the contents will not be validated; and 3) that the extension is optional (minOccurs="0"); and 4) the extension must be enclosed in its own XML elements, for example <ns4:extension>.

If, Ffor example, if an extension is desired to include for two elements, called <bufferZoneelement1> and <inclineMethodelement2>, the tailored schema would define a namespace, say "ns4." The XML would include a single XML dataframe, <ns4:extension> that contains the two child elements - <bufferZone> and <inclineMethod>.

The XML should look as follows:

```
<ns4:extension>  
<bufferZone>3</bufferZone>  
<inclineMethod>squareRoot</inclineMethod>  
</ns4:extension>
```

Resolution: Comment Status: Closed Disposition: Accepted

Corrected the built-in mechanism for XML extensibility mechanism that is contained in the content of each TMDD data frame. The prior <xs:any namespace="##other" processContents="lax" minOccurs="0"/> at the end of each data frame in TMDD has been updated to <xs:any namespace="##other" processContents="lax" minOccurs="0" maxOccurs="unbounded"/>. This change allows TMDD version update extensions and project-specific extensions. Replaced with 2.6 Handling TMDD Extensions.

Version Comment Addressed: TMDD v3.1

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1528	UC172	Bruce Eisenhart	TMDD v3.03c		TMDD v3.03c	

Comment: The document: ITS Standards Support for the Data Capture and Management Program- Design Content contains suggestions for additional design content to support connected vehicle applications.

The first additional area is support for the Queue Warning Application. This can be defined by the following needs and requirements:

Need:

An owner center needs to broadcast queue information to an external center

- Queue Information Request Message
- Queue Information Response Message

An owner center needs to broadcast queue warning information to an external center that has subscribed to receive such information.

- Queue warning subscription
- Queue warning publication

The Requirements defined for these needs are the following:

4.3.1 Queue Information

The requirements to exchange information about queues between centers are as follows.

4.3.1.1 Beginning of Queue Location - Position

The owner center shall provide the geographic location of the beginning of the queue, in latitude and longitude, as measured at the edge of the front bumper of the first vehicle of each queue as part of the link status information for each link.

4.3.1.2 Beginning of Queue Location - Linear Reference

The owner center shall provide the linear reference marker (e.g., mile marker) where the queue begins as measured at the edge of the front bumper of the first vehicle of each queue as part of the link status information for each link.

4.3.1.3 Beginning of Queue - Link Identifier

The owner center shall provide the link identifier where each queue begins as part of the link status information for each link. The link identifier is necessary if the beginning of the queue is located on a different (roadway) link.

4.3.1.4 End of Queue Location - Position

The owner center shall provide the geographic location of the end of the queue, in latitude and longitude, as measured at the edge of the rear bumper of the last vehicle in each queue, as part of the link status information for each link.

4.3.1.5 End of Queue Location - Linear Reference

The owner center shall provide the linear reference marker (e.g., mile marker) where the queue ends as measured at the edge of the rear bumper of the last vehicle of each queue as part of the link status information for each link.

4.3.1.6 End of Queue - Link Identifier

The owner center shall provide the link identifier where each queue ends as part of the link status information for each link. The link identifier is necessary if the end of the queue is located on a different (roadway) link.

4.3.1.7 Queue Length by Distance

The owner center shall provide the queue length of each queue, in meters, as part of the link status information for each link. The queue length is measured from the edge of the front bumper of the first vehicle in the queue, to the edge of the rear bumper of the last vehicle in the queue, and is a value from 0 to 65534 meters. A value of 65534 indicates the queue length is 65534 meters or longer. A value of 65535 indicates the queue length is unknown.

4.3.1.8 Queue Length by Vehicles

The owner center shall provide the queue length of each queue, in number of vehicles, as part of the link status information for each link. The number of vehicles in the queue is from 0 to 253. The value of 254 represents 254 or more vehicles in the queue. The value of 255 represents the number of vehicles in the queue is unknown.

4.3.1.9 Queue Length by Time

The owner center shall provide the queue length of each queue, in seconds, as part of the link status information for each link. The queue length is the estimated amount of time for the last vehicle in the queue to reach the location of the start of the queue (wait time), in seconds. The queue is measured from 0 to 65534 seconds. The value of 65535 represents the queue length is unknown.

4.3.1.10 Queue Speed

The owner center shall provide the average speed of the vehicles in each queue, in kilometers per hour, as part of the link status information for each link.

4.3.1.11 Queue Growth Rate

The owner center shall provide the rate of growth of each queue, in kilometers per hour, as part of the link status information for each link. The rate of growth is measured by the change in the queue length by distance. A positive value indicates the queue is growing in length while a negative value indicates the queue is decreasing in length.

4.3.1.12 Link State Queued

The owner center shall have a link state of "queued" as part of the event quantity information sent to an external

Comments

center, to indicate the number of vehicles queued on the link. This information can be sent as part of the event description information exchanged between centers.

NOTE: This requirement may be fulfilled by exchanging what information is broadcast at a location or by a device; or by a flag indicating a queue exists at a link. If the device is a dynamic message sign, this requirement is fulfilled. If the device is a RSU, then this requirement is not fulfilled. The proposed requirement represents the latter scenario. This might be fulfilled by the Link-oversaturated-flag.

4.3.1.13 Queue Confidence

The owner center shall provide the 95% confidence level for the currently reported position of the back of the queue to an external, taking into account the accuracy and precision of the sensor system(s) used to determine the back of the queue. The sensor system(s) used to determine the back of the queue may be a combination of traditional vehicle detection systems (loop detectors, video processing detectors) and the position and speeds of equipped vehicles, as provided by the basic safety messages broadcast.

4.3.2 Recommended Speeds

The requirements to exchange information about speed advisories for events between centers are as follows.

4.3.2.1 Target Speed

The owner center shall have a link state of "target vehicle speeds" in the event quantity information sent to an external center, indicating the recommended speeds for a link. The recommended target speeds, in kilometers per hour can be used for shockwave/breakdowns or for environmental purposes.

4.3.4 Support for Infrastructure Traveler Information Warnings

The following requirements allow an owner center to provide external centers information about the infrastructure traveler information messages that are being broadcast to travelers within a geographic area. Examples of alerts or recommendations include queue warnings, weather related alerts and recommended speeds.

Infrastructure-based traveler information are messages provided to travelers via wireless communications within a specific geographic area. There are two communications paths that are possible.

- A RSE is located on the roadway and broadcasts traveler information via wireless communications radios, such as DSRC, Wi-Fi, or Bluetooth, to travelers within communications range.

- A traveler has some type of wide area communications device, such as a cellular modem and can receive and act on traveler information messages intended for travelers within the specified geographic area that the traveler is in.

Only the communications path via the RSE is considered as there are limited deployments, if any, using the second communications path at this time.

4.3.4.1 Share RSE Inventory Information

The requirements for sharing RSE inventory information with other authorized centers are as follows:

4.3.4.1.1 Send RSE Inventory Information Upon Request

An owner center shall respond to an authorized external center requesting RSE inventory with a message containing the owner center's RSE inventory information.

4.3.4.1.2 Contents of the RSE Inventory Request

The requirements for RSE inventory requests sent from an external center to an owner center are found in Section 3.3.5.1.1.1, "Contents of Device Information Request", with the device type set to "Roadside Equipment" and device information type set to "device inventory."

4.3.4.1.3 Contents of the RSE Inventory Information

The RSE inventory information sent from an owner center to an external center shall consist of the generic device inventory header information (See Section 3.3.5.1.2.1).

4.3.4.2 Share RSE Status Information

The requirements for sharing RSE status information with other authorized centers are as follows:

4.3.4.2.1 Send RSE Status Information Upon Request

An owner center shall respond to an authorized external center requesting RSE status with a message containing the owner center's RSE status information.

4.3.4.2.2 Contents of the RSE Status Request

The requirements for RSE status requests from an external center to an owner center are found in Section 3.3.5.1.1.1, "Contents of Device Information Request", with the device type set to "RoadSide Equipment" and device information type set to "device status."

4.3.4.2.3 Contents of the RSE Status Information

An owner center shall send RSE status information to external centers.

4.3.4.2.3.1 Required RSE Status Content

The RSE status information sent from an owner center to an external center shall consist of the generic device status header information (See Section 3.3.5.1.3.1).

4.3.4.2.3.2 Current Traveler Information Message

The owner center shall provide each traveler information message being broadcast by the RSE as part of the RSE status information for each RSE.

4.3.4.2.3.3 Current Traveler Information Message - Justification

The owner center shall provide the justification (event) that resulted in each traveler information message being broadcast by the RSE as part of the RSE status information for each RSE.

4.3.4.2.3.4 Current Traveler Information Message - Direction

Comments

The owner center shall provide the direction of motion (of the connected device) that each traveler information message being broadcast by the RSE is valid for as part of the RSE status information for each RSE. The connected device's direction is measured by one or more heading slices, with each heading slice 22.5 degrees wide. This requirement allows traveler information messages to be valid for only those connected devices traveling in a specific direction. For example, a weather message may apply to all directions, while an incident message may be applicable for travelers heading towards the location of an incident.

4.3.4.2.3.5 Current Traveler Information Message - Extent

The owner center shall provide the radius that each traveler information message being broadcast by the RSE is valid for as part of the RSE status information for each RSE. The reference point is the geographic location of the RSE, and can be found in the RSE inventory message.

4.3.4.2.3.6 Current Traveler Information Message - Advisory Speed

The owner center shall provide the advisory link speed for each traveler information message being broadcast by the RSE as part of the RSE status information for each RSE. The advisory link speed represents the recommended speed, in kilometers per hour.

The details of suggested new design content can be found in the document.

Resolution:

Comment Status: Open

Disposition: Future

Support for connected vehicles are a new user need and outside of the existing ITS maintenance support contract.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1530	UC172	Bruce Eisenhart	TMDD v3.03c		TMDD v3.03c	

Comment: The document: ITS Standards Support for the Data Capture and Management Program- Design Content contains suggestions for additional design content to support connected vehicle applications.

The third additional area is support for the Freight Advanced Traveler Information Systems (FRATIS) Application. This can be defined by the following needs and requirements

Needs:

A freight management center needs to get information on available parking for freight vehicles.

- Parking Information Request
- Parking Information Response

A freight management center needs to get information on routes for commercial vehicles.

- Truck Route Request
- Truck Route Response

Requirements:

4.3.5Parking Information

The TMDD Steering Committee is currently considering a proposal to support parking information, which will fulfill PRIDs 45 and 69, except for amenities available, so this proposed design will only address amenities available. The proposed design adds an optional data element to the parking information message to indicate what amenities are available for a parking lot, a parking section, and a parking space (A parking lot may consist of different parking sections, such as a level, and a parking section contains several parking spaces).

The requirements to exchange information about parking information on a link(s) between centers are as follows.

4.3.5.1Parking Information - General

An owner center shall request parking information from an external center. Parking information consists of the location of the parking lot or garage, number of parking spaces available by type at the parking lot, percentage of parking spaces available by type at the parking lot, and the operating hours for the parking lot. The parking lot location is defined by its latitude and longitude information. The parking types are defined in SAE J2354 - DE_ParkingSpaceKind. Note: DE_ParkingSpaceKind may need more details, such as truck type or amenities.

4.3.5.2Parking Information - Truck

A center shall request truck parking information from another center. Parking information consists of the location of the parking, number of parking spaces available by space size (e.g., length by width), percentage of parking spaces available by size, and amenities available. Amenities available define what services are available at a parking location or parking space that a freight vehicle operator may be interested in. Examples of amenities are electrical power for the tractor, showers, Wi-Fi, and food.

4.3.7Preferred Route

An owner center shall send if a route is a preferred route to an external center. An agency may indicate that a route is a preferred (recommended) travel route. This requirement allows the appropriate transportation agency that maintain or operate the roadway to select routes that avoid nonpreferred routes, such as through congested, residential, or historical streets.

The details of suggested new design content can be found in the document.

Resolution: Comment Status: Open Disposition: Future

Support for connected vehicles are a new user need and outside of the existing ITS maintenance support contract.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1531	UC172	Bruce Eisenhart	TMDD v3.03c		TMDD v3.03c	

Comment: The document: ITS Standards Support for the Data Capture and Management Program- Design Content contains suggestions for additional design content to support connected vehicle applications.

The fourth additional area is support for the Road Weather Management Program. This can be defined by the following needs and requirements

Need:

An external center needs forecast weather data and requests this data from an owner center that holds the data. The owner center responds with future weather data.

- Predicted Environmental Conditions Request
- Predicted Environmental Conditions Response

4.3.6 Predicted Environmental Conditions

An owner center shall provide the predicted weather data at a future time to an external center. Future time is measured as a date and time. Weather data consists of ambient air temperature, dew point temperature, air pressure, average wind speed, average wind direction, gust wind speed, humidity, precipitation rate, precipitation type, probability of precipitation, depth of water, visibility, cloud situation and pavement surface condition.

The TMDD standard already supports the exchange of current environmental conditions, using data collected by environmental sensors at a fixed location. A user need to exchange predicted weather data, and the associated requirements, has been identified by the members of the TMDD Steering Committee, and informal discussions have started on potential approaches to satisfy this user need.

A discussion with members of the USDOT Road Weather Management Program indicated that predicted environmental conditions should be tied to a roadway link. That is, instead of providing predicted environmental conditions based on a fixed location (point), predicted environmental conditions should be exchanged based on roadway links.

One agency has implemented predicted environmental conditions as a fixed event. The agency assigned a fixed event identifier and continuous update the event with the most current forecasted weather data. Another proposed approach is to add predicted weather data to the link status message. The discussions are on-going so no proposed design is provided at this time.

The details of suggested new design content can be found in the document.

Resolution: Comment Status:Open Disposition: Future
 Support for connected vehicles are a new user need and outside of the existing ITS maintenance support contract.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1532	UC173	Jean-Claude Chami	TMDD v3.03d		TMDD v3.03d	

Comment: We are implementing a TMDD interface to build a traffic data hub for sharing traffic related data for roads incidents to City depts such as police, Transport, Fire dept & and the like.

We have interfaced 5 sources of events [...]

one of them requires sending a large number of records (REST service format) - from the hub (outbound) and we were wondering if we could implement a "pagination" scheme because there is simply too many records to send in 1 request ?

Resolution: Comment Status:Closed Disposition:
 TMDD does not support pagination, though you may consider adding an extension to accomplish passing the low and high value for the ranges.

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1533	UC173	Jean-Claude Chami	TMDD v3.03d		TMDD v3.03d	

Comment: We are implementing a TMDD interface to build a traffic data hub for sharing traffic related data for roads incidents to City depts such as police, Transport, Fire dept & and the like.

We have interfaced 5 sources of events [...] is it better to perform a PUSH ? or a PULL ?

Resolution: Comment Status: Closed Disposition: Informative
PUSH versus PULL depends on your implementation.

Another approach is to pass updates only.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1534	UC174	Mike Jenkinson, PE	TMDD v3.03d		TMDD v3.03d	

Comment: multipart message for subscription model

Description:

When using a document/literal style SOAP binding for an operation with messages (input, output, or fault) that are defined with multiple parts, only one of those parts should be bound to the SOAP body in order to be compliant with the WS-I Basic Profile 2.0. In TMDD, the messages created for subscription model have multiple parts, while its wsdl binding uses document/literal style. This is not compliant with the standard.

Number of Occurrences in TMDD 3.03d: 57

Sample Error Message:

Ignoring operation "dlCenterActiveVerificationSubscription": more than one part bound to body

WS Standard Reference:

<http://ws-i.org/profiles/basicprofile-2.0-2010-11-09.html>
See R2712

Example WSDL Violation:

```
"<message name=""MSG_DeviceInformationSubscription"">      <part name=""c2cMsgAdmin""
element=""c2c:c2cMessageSubscription""/>      <part name=""message""
element=""tmdd:deviceInformationRequestMsg""/></message>"
```

Recommended Fix:

For each operation, make sure to define one request message type and one response message type in schema section. In the schema, use XML <complexType> to define multiple data objects for multiple parts.

Resolution: Comment Status: Open Disposition:

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1535	UC174	Mike Jenkinson, PE	TMDD v3.03d		TMDD v3.03d	

Comment: Non unique body parts

Description:

When using document/literal style of SOAP binding, each operation must have a unique signature in order for SOAP call to be successfully dispatched. In TMDD, the same message type, which means the same signature, is being used in multiple operations.

Number of Occurrences in TMDD 3.03d: 41

Sample Error Message:

Non unique body parts! In a port, as per BP 1.1 R2710 operations must have unique operation signature on the wire for successful dispatch. Operations "dICCTVStatusRequest" and "dICCTVInventoryRequest" have the same request body block deviceInformationRequestMsg. Method dispatching may fail, runtime will try to dispatch using SOAPAction

WS Standard Reference:

http://www.ws-i.org/Profiles/BasicProfile-1.1.html?cm_mc_uid=93599396641414960344334&cm_mc_sid_50200000=1496293698 See R2710 http://www.ws-i.org/profiles/basicprofile-1.1.html#Operation_Signatures

Example of WSDL Violation:

```
<operation name="dGateInventoryRequest"> <input
message="tns:MSG_DeviceInformationRequest"/> <output
message="tns:MSG_GateInventory"/> <fault name="errorReport"
message="tns:MSG_ErrorReport"/></operation><operation name="dGateStatusRequest"> <input
message="tns:MSG_DeviceInformationRequest"/> <output message="tns:MSG_GateStatus"/>
<fault name="errorReport" message="tns:MSG_ErrorReport"/></operation><operation
name="dGateControlScheduleRequest"> <input
message="tns:MSG_DeviceInformationRequest"/> <output
message="tns:MSG_GateControlSchedule"/> <fault name="errorReport"
message="tns:MSG_ErrorReport"/></operation>
```

Recommended Fix:

For each operation, create its own unique request message type and unique response message type.

Resolution:	Comment Status: Open	Disposition:
Version Comment Addressed:		

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1536	UC174	Mike Jenkinson, PE	TMDD v3.03d		TMDD v3.03d	

Comment: TMDD is not WS-I 2.0 compliant

Standard Java and .NET SOAP libraries will not compile

Each solution must be custom developed

Higher software development costs

Increased likelihood for potential bugs and operational issues

Increased difficulty for system integration, higher integration costs

Resolution:	Comment Status: Open	Disposition:
Version Comment Addressed:		

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1537	UC175	Blake Christie, CSEP	TMDD v3.03d		TMDD v3.03d	

Comment: During testing of the new version of the C2C RI that supports TMDD v3.03d, it has come to our attention that there is an issue with the DMS Appearance request requirements and the actual implementation of said requirements.

USDOT requests that the following issue be addressed in version 3.04 of the TMDD.

TMDD v3.03d specifies the following requirements related to request and response messages related to DMS Message Appearance:

3.3.5.5.6 Share DMS Message Appearance

The requirements to share how a message would appear on a DMS with other authorized centers are as follows:

3.3.5.5.6.1 Send DMS Message Appearance Upon Request

An owner center shall respond to an authorized external center requesting how a message would appear on a DMS with messages containing the pertinent information required to reconstruct the message.

3.3.5.5.6.2 Contents of a DMS Message Appearance Request

The DMS message appearance request sent from an external center to an owner center shall include:

- a. Generic device information request (See Section 3.3.5.1.1.1), with the device type set to "dynamic message sign" and device information type set to "message appearance"; and
- b. Message requested in MULTI language; or
- c. Message number, the memory type (permanent, changeable, volatile) and the CRC of the message being requested; or
- d. The current message flag.

3.3.5.5.6.3 Contents of the DMS Message Appearance Information

An owner center shall send DMS message appearance information to an external center.

3.3.5.5.6.3.1 Required DMS Message Appearance Information

The DMS message appearance information sent from an owner center to an external center for a DMS shall include:

- a. Owner organization information (See 3.3.2.5.1 and 3.3.2.5.2);
- b. Unique identifier of each DMS device; and
- c. Sign type of each DMS device

The requirements of the Message Appearance Request message indicate that the request message (dMSMessageAppearanceRequest) is for only one DMS response. However, the response message requirements can include a set of parameters that might result in a response message (dMSMessageAppearanceMsg) containing multiple sets of DMS Message Appearance Information. The design of the dMSMessageAppearanceMsg in fact limits the response to one message on one device. In addition, the dMSMessageAppearanceRequest does not specify a particular device id and if sent to a system containing multiple DMS with identical Message Numbers would not be sufficient to specify which message should be returned.

The C2C RI will address this issue in the following manner:

If no device-id is specified as part of the dMSMessageAppearanceRequest, when the C2C RI is operating in entity emulation mode (processing request messages as a live center should), it will return an errorReportMessage with the error-code field set to (3) or "missing information prevents processing message".

UDSOT requests that the requirements for 3.3.5.5.6 Share DMS Message Appearance need to be modified to reflect this as expected behavior (must specify the device type, which device, and the message) in the next version of TMDD and make the requirements consistent for only one DMS appearance to be returned per request.

Resolution:	Comment Status: Closed	Disposition: Accepted
Added language in TMDD Volume I to limit the contents of a DMS message appearance request to a single DMS per request.		
Version Comment Addressed:	TMDD v3.1	

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1539	UC176	Israel Lopez	TMDD v3.03d		TMDD v3.03d	

Comment: The current FEU dialog is good for 511, but does not fit the need for C2C sharing between Computer Aided Dispatch (CAD) systems. We are getting to the point of sharing our CAD data using the FEU mechanism for other trusted strategic partners. I would like to bring this up as a talking point for the next TMDD Committee Member meeting. If you look through the XML sample, there is no Personable Identifiable Information (PII) and the information is needed to provide performance metrics for the Freeway Service Patrol by WayCare.

Resolution:	Comment Status: Open	Disposition:
Version Comment Addressed:		

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1540	UC177	Kenneth Vaughn	TMDD v3.04 pRS Draft 4			

Comment: The ASN.1 edits to enumerated values are not backwards compatible; the only backwards compatible solution is to deprecate the existing types and create new ones. (As XML is less rigorous in its specification, the values can be extended)

Resolution:	Comment Status: Closed	Disposition: No Longer Applica
Removed support for ASN.1 application level profile.		
Version Comment Addressed: TMDD v3.1		

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1541	UC177	Kenneth Vaughn	TMDD v3.04 pRS Draft 4			

Comment: The ASN.1 edits to sequence values are not done in a backwards compatible manner. See ISO 8824-1 for the correct mechanism.

They should look something like:
 HARMessageInventory ::= SEQUENCE {
 restrictions Restrictions OPTIONAL,
 organization-information OrganizationInformation,
 device-id Organization-resource-identifier,
 message-number Organization-resource-identifier,
 current-message Har-message,
 last-update-time DateTimeZone OPTIONAL,
 ...
 [[2:
 har-priority Device-plan-priority OPTIONAL,
]],
 ...
 }

Resolution:	Comment Status: Closed	Disposition: No Longer Applica
Removed support for ASN.1 application level profile.		
Version Comment Addressed: TMDD v3.1		

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1542	UC177	Kenneth Vaughn	TMDD v3.04 pRS Draft 4			

Comment: The XML edits to structures are not backwards compatible; the only backwards compatible solutions are to:
 a. Define the extensions in separate modules with different namespaces (i.e., the standard only supports extensions from the ##other namespace)
 b. Deprecate the existing types and create new ones

Resolution:	Comment Status: Closed	Disposition: Accepted
Corrected the built-in mechanism for XML extensibility mechanism that is contained in the content of each TMDD data frame. The prior <xs:any namespace="##other" processContents="lax" minOccurs="0"/> at the end of each data frame in TMDD has been updated to <xs:any namespace="##other" processContents="lax" minOccurs="0" maxOccurs="unbounded"/>. This change allows TMDD version update extensions and project-specific extensions.		
Version Comment Addressed: TMDD v3.1		

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1543	UC177	Kenneth Vaughn	TMDD v3.04 pRS Draft 4			

Comment: The claimed extension of "roadway-clear-time" does not exist in the draft.

Resolution: Comment Status: Closed Disposition: Rejected

The extension is roadway-cleared-time.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1544	UC177	Kenneth Vaughn	TMDD v3.04 pRS Draft 4			

Comment: Changing the sizes of data types is not backwards compatible (e.g., it can cause buffer overruns when a older implementation receives a newer message).

Resolution: Comment Status: Closed Disposition: Accepted

Added language to TMDD v3.1 Volume II to address this. 2.6.5 - Extending Data Elements in XML - Data elements in versions prior to TMDD v3.1 do not have an extension mechanism (e.g., there is no <xs:any> tag). Therefore any new items added to an enumeration, or a change in a data type of an existing element will break backwards compatibility. Thus new data elements must be added to support enumerations or to change a data type. Also, see 2.6.5.1 - TMDD Extensions for Data Elements.

Version Comment Addressed: TMDD v3.1

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1545	UC177	Kenneth Vaughn	TMDD v3.04 pRS Draft 4			

Comment: I noticed that the ASN.1 and XML are not compatible. In particular, I noticed that the ASN.1 only allows standardized extensions while the XML only allows custom extensions (i.e., from a different module).

Resolution: Comment Status: Closed Disposition: No Longer Applicable

Removed support for ASN.1 application level profile.

Version Comment Addressed: TMDD v3.1

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1546	UC178	Justin Anderson	TMDD v3.04 pRS Draft 4			Volume I - History - #3

Comment: "Updated the language in Section 2.6.2.2 XML in Volume II to clarify the format of XML extensions."

I believe the tailored schema would need to include an element named "extension" for the example to be valid.

Resolution: Comment Status: Closed Disposition: Accepted

Updated Section 2.6 Handling TMDD Extensions in Volume II.

Version Comment Addressed: TMDD v3.1

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1547	UC178	Justin Anderson	TMDD v3.04 pRS Draft 4			History - Volume I - #4

Comment: Extended the organization-resource-identifier data element from a string length of IA5String (SIZE(1..32)) to IA5String (SIZE(1..64)).

Please note that older systems would not be able to handle the extra characters.

Resolution: Comment Status: Closed Disposition: Rejected

Unable to do this without breaking backwards compatibility. Considered adding an extension but unsure if it would be really used by other implementations. Decided to leave as is and allow the existing SANDAG implementation to address it as a project-level extension

Version Comment Addressed:

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1548	UC178	Justin Anderson	TMDD v3.04 pRS Draft 4			History - Volume I - #5

Comment: Added a roadway-clear-time data frame to support a new requirement to define the time an unplanned event ended as part of the event time information (Section 3.3.3.6.4.1.2.11).

Please note that older systems would not be able to handle the extra element.

Resolution:	Comment Status:	Closed	Disposition:	Accepted
Added a new EventTimesExt data frame with a new roadway-clear-time data element to support a new optional requirement to define the time an unplanned event ended as part of the event time information.				
Version Comment Addressed:	TMDD v3.1			

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1549	UC178	Justin Anderson	TMDD v3.04 pRS Draft 4			History - Volume I - #8

Comment: Added a 'central-adaptive' enumeration to the intersection-signal-control-source data element (Section 3.3.5.11.2.5.1b).

Please note that older systems would not be able to handle the new enumeration.

Resolution:	Comment Status:	Closed	Disposition:	Accepted
Added a new IntersectionSignalStatusExt data frame with a new signal-control-source-extended data element to support a new 'central-adaptive' enumeration for signal-control source.				
Version Comment Addressed:	TMDD v3.1			

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1550	UC178	Justin Anderson	TMDD v3.04 pRS Draft 4			History - Volume I - #9

Comment: Added an 'standby' enumeration to the intersection-signal-timing-mode data element (Section 3.3.5.11.2.5.1d).

Please note that older systems would not be able to handle the new enumeration.

Resolution:	Comment Status:	Closed	Disposition:	Accepted
Added a new IntersectionSignalStatusExt data frame with a new current-signal-timing-mode-extended data element to support a new 'standby' enumeration for current-signal-timing-mode.				
Version Comment Addressed:	TMDD v3.1			

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1551	UC178	Justin Anderson	TMDD v3.04 pRS Draft 4			History - Volume I - #10

Comment: Added a device-plan-priority data element to support a default priority for a device plan to support a new optional requirement for HAR Message Default Priority (Section 3.3.5.8.7.5.2.3).

Please note that older systems would not be able to handle the new element.

The RTM does not include a Reference DC for this element.

Resolution:	Comment Status:	Closed	Disposition:	Accepted
Added a new HARMessageInventoryExt data frame with a har-priority data element to support a new optional requirement, HAR Message Default Priority, to define the default priority for a HAR message.				
Version Comment Addressed:	TMDD v3.1			

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1552	UC178	Justin Anderson	TMDD v3.04 pRS Draft 4			History - Volume I - #11

Comment: Added a device-plan-duration data element to indicate the duration of the HAR message to support a new optional requirement for the HAR Status message (Section 3.3.5.8.2.5.2.3).

Please note that older systems would not be able to handle the new element.

Resolution: Comment Status: Closed Disposition: Accepted

Added a new HARStatusExt data frame with a device-plan-duration data element to support a new optional requirement, Current Message Duration - HAR, to define the duration a HAR message is to be broadcasted.

Version Comment Addressed: TMDD v3.1

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1553	UC178	Justin Anderson	TMDD v3.04 pRS Draft 4			History - Volume I - #12

Comment: Added a data frame for vehicle classification counts to support new optional requirements for detector counts by the FHWA 13-category vehicle classification for the Detector Data information message (Section 3.3.5.2.3.5.2.19 through 3.3.5.2.3.5.2.32).

Please note that older systems would not be able to handle the new element.

Resolution: Comment Status: Closed Disposition: Accepted

Added a new DetectorDataDetailExt data frame to support new optional requirements to provide the number of vehicles detected for a vehicle class as defined by FHWA 13-category classification.

Version Comment Addressed: TMDD v3.1

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1554	UC178	Justin Anderson	TMDD v3.04 pRS Draft 4			History - Volume I - #13

Comment: Added support for multiple URL references to the device inventory header information (Section 3.3.5.1.2.1.2.14).

Please note that if requirement 3.3.5.1.2.1.2.14 is selected and made mandatory for a project the inventory header must contain at least one of device-url, device-url2, device-url3 or device-url4.

Resolution: Comment Status: Closed Disposition: Accepted

Added a new DeviceInventoryHeaderExt data frame to support multiple URL references.

Version Comment Addressed: TMDD v3.1

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1555	UC178	Justin Anderson	TMDD v3.04 pRS Draft 4			History - Volume I - #14

Comment: Added data elements to support an optional requirement to support enabling/disabling up to 8 beacons for a HAR (Section 3.3.5.8.1.5.2.4, 3.3.5.8.1.5.2.5 and 3.3.5.8.1.5.2.6).

In Volume I, The NRTM has errors in the Requirement ID/Requirement mapping for the changes included in this update. For Need 2.3.5.7.1 Need to Share HAR Inventory, the Response Message should include the following new rows:

3.3.5.8.1.5.2.4 Beacon Availability O Yes/No

3.3.5.8.1.5.2.5 Beacon Location O Yes/No

3.3.5.8.1.5.2.6 Beacon Description O Yes/No

Resolution: Comment Status: Closed Disposition: Accepted

Added a new HARControlRequestExt data frame to support enabling/disabling up to 8 beacons per request for a HAR.

Version Comment Addressed: TMDD v3.1

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1556	UC178	Justin Anderson	TMDD v3.04 pRS Draft 4			History - Volume I - #14

Comment: Added data elements to support an optional requirement to support enabling/disabling up to 8 beacons for a HAR (Section 3.3.5.8.1.5.2.4, 3.3.5.8.1.5.2.5 and 3.3.5.8.1.5.2.6).

The proposed update adds 23 new elements to harInventory Data Frame to represent 8 HAR Beacons. I suggest that a new HARBeaconDescription Data Frame be created to hold the har-beacon, har-beacon-location and har-beacon-description information. An optional list of this type would be added to the harInventoryDataFrame. This change would make it easier for implementers to add/access the beacon information and it would also make it easier to trace the new requirements to the additional design content.

This diagram illustrates the harInventoryMsg proposed by this standard update.

Resolution: Comment Status: Closed Disposition: Accepted

Added a new HARInventoryExt data frame to support HARs with up to 8 beacons.

Version Comment Addressed: TMDD v3.1

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1557	UC178	Justin Anderson	TMDD v3.04 pRS Draft 4			History - Volume I - #14

Comment: Added data elements to support an optional requirement to support enabling/disabling up to 8 beacons for a HAR (Section 3.3.5.8.1.5.2.4, 3.3.5.8.1.5.2.5 and 3.3.5.8.1.5.2.6).

A similar modification was proposed for the harStatusMsg. Our suggested changes would make it easier for implementers to add/access the beacon information and it would also make it easier to trace the new requirements to the additional design content.

Here is a diagram of the original message.

Resolution: Comment Status: Closed Disposition: Accepted

Added a new HARStatusExt data frame to support the HAR status information for up to 8 beacons.

Version Comment Addressed: TMDD v3.1

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1558	UC178	Justin Anderson	TMDD v3.04 pRS Draft 4			History - Volume I - #14

Comment: Added data elements to support an optional requirement to support enabling/disabling up to 8 beacons for a HAR (Section 3.3.5.8.1.5.2.4, 3.3.5.8.1.5.2.5 and 3.3.5.8.1.5.2.6).

RTM:

a. With the suggested design references above the 23 new rows that were added to the RTM for this update would be replaced by the following 3 rows.

3.3.5.8.1.5.2.4 Beacon Availability data-element device-beacon3.4.5.2 har-beacon har-beacon-item

3.3.5.8.1.5.2.5 Beacon Location data-element geoLocation3.6.9.4 har-beacon-location har-beacon-item

The current RTM references device-beacon2, device-beacon3, device-beacon4, device-beacon5, device-beacon6, device-beacon7 and device-beacon8 elements. If the suggested design changes above are not accepted, then each of these references should be modified to reflect the existing design and use the har-beacon# pattern.

3.3.5.8.1.5.2.6 Beacon Description data-element organization-resource-name3.4.16.9 har-beacon-description har-beacon-item

Resolution: Comment Status: Closed Disposition: Accepted

Added a new HARControlRequestExt data frame to support enabling/disabling up to 8 beacons per request for a HAR. Added a new HARInventoryExt data frame to support HARs with up to 8 beacons. Added a new HARStatusExt data frame to support the HAR status information for up to 8 beacons.

Version Comment Addressed: TMDD v3.1

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1559	UC178	Justin Anderson	TMDD v3.04 pRS Draft 4			History - Volume I - #15

Comment: Increased the size of a HAR message from 1024 bytes to 8192 bytes.

Please note that older systems would not be able to handle the longer message.

Resolution:	Comment Status: Closed	Disposition: Accepted
Added a new HARMessageInventoryExt data frame with a har-message-extended data element to support a new optional requirement, HAR Extended Message Length, to extend the maximum length of the HAR message supported. Added a new HARStatusExt data frame with a har-current-message-extended data element a new optional requirement, Extended Message Length - HAR, to extend the maximum length of a HAR message .supported		
Version Comment Addressed:	TMDD v3.1	

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1560	UC178	Justin Anderson	TMDD v3.04 pRS Draft 4			History - Volume I - #16

Comment: Added a data frame to define a valid time period to support a new optional requirement for device information requests, such as for detector data. Also added a requirement that was missing to support a list of center identifiers as part of a device information request (Section 3.3.5.1.1.1.3.8 and 3.3.5.1.1.1.3.9).

Please note that older systems would not be able to handle the additional elements.

Resolution:	Comment Status: Closed	Disposition: Accepted
Added a new DeviceInformationRequestFilterExt data frame with a new time-range data frame to support a new optional requirement, Time Range Filter, to define a valid time period for device information requests, such as for detector data.		
Version Comment Addressed:	TMDD v3.1	

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1561	UC178	Justin Anderson	TMDD v3.04 pRS Draft 4			History - Volume I - #18

Comment: Changed the namespace from [http://www.t added a data frame to define a valid time period to support a new optional requirement for device information requests, such as for detector data. Also added a requirement that was missing to support a list of center identifiers as part of a device information request \(Section 3.3.5.1.1.1.3.8 and 3.3.5.1.1.1.3.9\).](http://www.t added a data frame to define a valid time period to support a new optional requirement for device information requests, such as for detector data. Also added a requirement that was missing to support a list of center identifiers as part of a device information request (Section 3.3.5.1.1.1.3.8 and 3.3.5.1.1.1.3.9).) to [http://www.t added a data frame to define a valid time period to support a new optional requirement for device information requests, such as for detector data. Also added a requirement that was missing to support a list of center identifiers as part of a device information request \(Section 3.3.5.1.1.1.3.8 and 3.3.5.1.1.1.3.9\).](http://www.t added a data frame to define a valid time period to support a new optional requirement for device information requests, such as for detector data. Also added a requirement that was missing to support a list of center identifiers as part of a device information request (Section 3.3.5.1.1.1.3.8 and 3.3.5.1.1.1.3.9).)

Comment/Suggestions

i. Volume I

1. Recommend consideration for not implementing this change within this update. Changing the namespace from [http://www.t added a data frame to define a valid time period to support a new optional requirement for device information requests, such as for detector data. Also added a requirement that was missing to support a list of center identifiers as part of a device information request \(Section 3.3.5.1.1.1.3.8 and 3.3.5.1.1.1.3.9\).](http://www.t added a data frame to define a valid time period to support a new optional requirement for device information requests, such as for detector data. Also added a requirement that was missing to support a list of center identifiers as part of a device information request (Section 3.3.5.1.1.1.3.8 and 3.3.5.1.1.1.3.9).) to [http://www.t added a data frame to define a valid time period to support a new optional requirement for device information requests, such as for detector data. Also added a requirement that was missing to support a list of center identifiers as part of a device information request \(Section 3.3.5.1.1.1.3.8 and 3.3.5.1.1.1.3.9\).](http://www.t added a data frame to define a valid time period to support a new optional requirement for device information requests, such as for detector data. Also added a requirement that was missing to support a list of center identifiers as part of a device information request (Section 3.3.5.1.1.1.3.8 and 3.3.5.1.1.1.3.9).) would likely prevent systems using previous version of TMDD and systems using the current version from being able to successfully communicate at all.

ii. WSDL/Schemas

1. As above, I suggest considering leaving the namespace unchanged from [http://www.t added a data frame to define a valid time period to support a new optional requirement for device information requests, such as for detector data. Also added a requirement that was missing to support a list of center identifiers as part of a device information request \(Section 3.3.5.1.1.1.3.8 and 3.3.5.1.1.1.3.9\).](http://www.t added a data frame to define a valid time period to support a new optional requirement for device information requests, such as for detector data. Also added a requirement that was missing to support a list of center identifiers as part of a device information request (Section 3.3.5.1.1.1.3.8 and 3.3.5.1.1.1.3.9).) to continue allowing some interoperability between older deployments of TMDD v3.03 and the current update.

Resolution:	Comment Status: Closed	Disposition: Accepted
Corrected the built-in mechanism for XML extensibility mechanism that is contained in the content of each TMDD data frame. The prior <code><xs:any namespace="##other" processContents="lax" minOccurs="0"/></code> at the end of each data frame in TMDD has been updated to <code><xs:any namespace="##other" processContents="lax" minOccurs="0" maxOccurs="unbounded"/></code> . This change allows TMDD version update extensions and project-specific extensions.		
Version Comment Addressed:	TMDD v3.1	

Comments

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1562	UC178	Justin Anderson	TMDD v3.04 pRS Draft 4			History - Volume I

Comment: Other Items not described in the history section

Added a probe detector type to the set of detector types (Section 3.3.5.2.1.5.1b).

Please note that older systems would not be able to handle the new enumeration.

Resolution: Comment Status: Closed Disposition: Accepted

Added a new DetectorInventoryDetailsExt and DetectorMaintenanceHistoryDetailExt data frame with a new detector-type-extended data element to support a new 'probe' enumeration for detector-type.

Version Comment Addressed: TMDD v3.1

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1563	UC178	Justin Anderson	TMDD v3.04 pRS Draft 4			History - Volume I

Comment: Other Items not described in the history section

Added requirements for optional HAR Control Request Content. In particular whether a beacon is to be enabled or disabled as part of a HAR control request (Section 3.3.5.8.3.2.2 and 3.3.5.8.3.2.2.1).

Please note that older systems would not be able to handle the additional elements (specified in Volume II) associated with these requirements.

Resolution: Comment Status: Closed Disposition: Accepted

Added a new HARControlRequestExt data frame to support enabling/disabling up to 8 beacons per request for a HAR.

Version Comment Addressed: TMDD v3.1

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1564	UC178	Justin Anderson	TMDD v3.04 pRS Draft 4			History - Volume I

Comment: Other Items not described in the history section

The message-type-id element of the requestHeader was made optional in Volume II section 3.3.8.41. It was previously mandatory and would cause an error in older TMDD implementations if it is not included.

Resolution: Comment Status: Closed Disposition:

Not sure why this change was made. Redacted.

Version Comment Addressed:

Comment ID	UCNumber	Commentor:	Document:	Page:	Version:	Paragraph:
1565	UC178	Justin Anderson	TMDD v3.04 pRS Draft 4			History - Volume I

Comment: Other Items not described in the history section

Volume 1 references ARC-IT version 7.1, and Volume 2 references ARC-IT version 7.0. Should these be consistent? ARC-IT version 8.1 has also been released with new service package names, identifiers, and potential information flows. Should updates be considered with the changes in ARC-IT 8.1?

Resolution: Comment Status: Closed Disposition: Accepted

Updated TMDD to reference ARC-IT, which is equivalent to the National ITS Architecture v8+. The specific version of ARC-IT was not mentioned.

Version Comment Addressed: TMDD v3.1

Comments

Comment ID UCNumber Commentor:	Document:	Page:	Version:	Paragraph:
1566 UC179				

Comment: These are comments on a consultant's proposal for a revised section in TMDD Volume II to address both TMDD and project-specific extensions consistent with what was agreed to during the last TMDD Steering Committee meeting on October 19, and an informal technical web conference on November 6. The revised section addresses the concerns about backwards compatibility moving forward. Note that the proposal only considers the XML version of TMDD as the Steering Committee agree to remove the ASN.1 format during the October 19 Steering Committee.

Caltrans has had or developer for the Connected Corridors ICM in Las Angeles review the proposal and here is a portion of their review. Understand TransCore, McCain and Kimley-Horn have made or are making changes to their central system software under contract to Caltrans and our ICM partners at a cost of over a million dollars. Caltrans submitted identified errors and suggested changes to the TMDD in 2017, see attached, to support our ICM to be compliant with TMDD.

. this proposal, while it looks to address questions of how to extend TMDD, essentially makes what we are currently doing within our own project, still non-compliant and does not address the issues we raised. In addition, it specifically prohibits what we've done, and to become compliant, would require custom coding of the web services removing the use of standard java services framework as an option. Without the WSI compatibility, we would have to recode the entire set of services, as would each of the vendors of our connected systems.

Resolution:	Comment Status: Closed	Disposition: No Longer Applica
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The final approved proposal for addressing backwards compatibility and extensions was incorporated into TMDD v3.1.

Version Comment Addressed: TMDD v3.1